

Free Software! Links Inside!

HUB

March 2009 Volume 22 Number 03

The Computer Paper

Free

Open Source Defined
What it means to you

QuakeLive:
Fast fragging for free

Alternate Operating Systems
Where OS also stands for open source

Power Pellets:
Tremulous and the Dell XPS 625

The Free Issue!



AVG

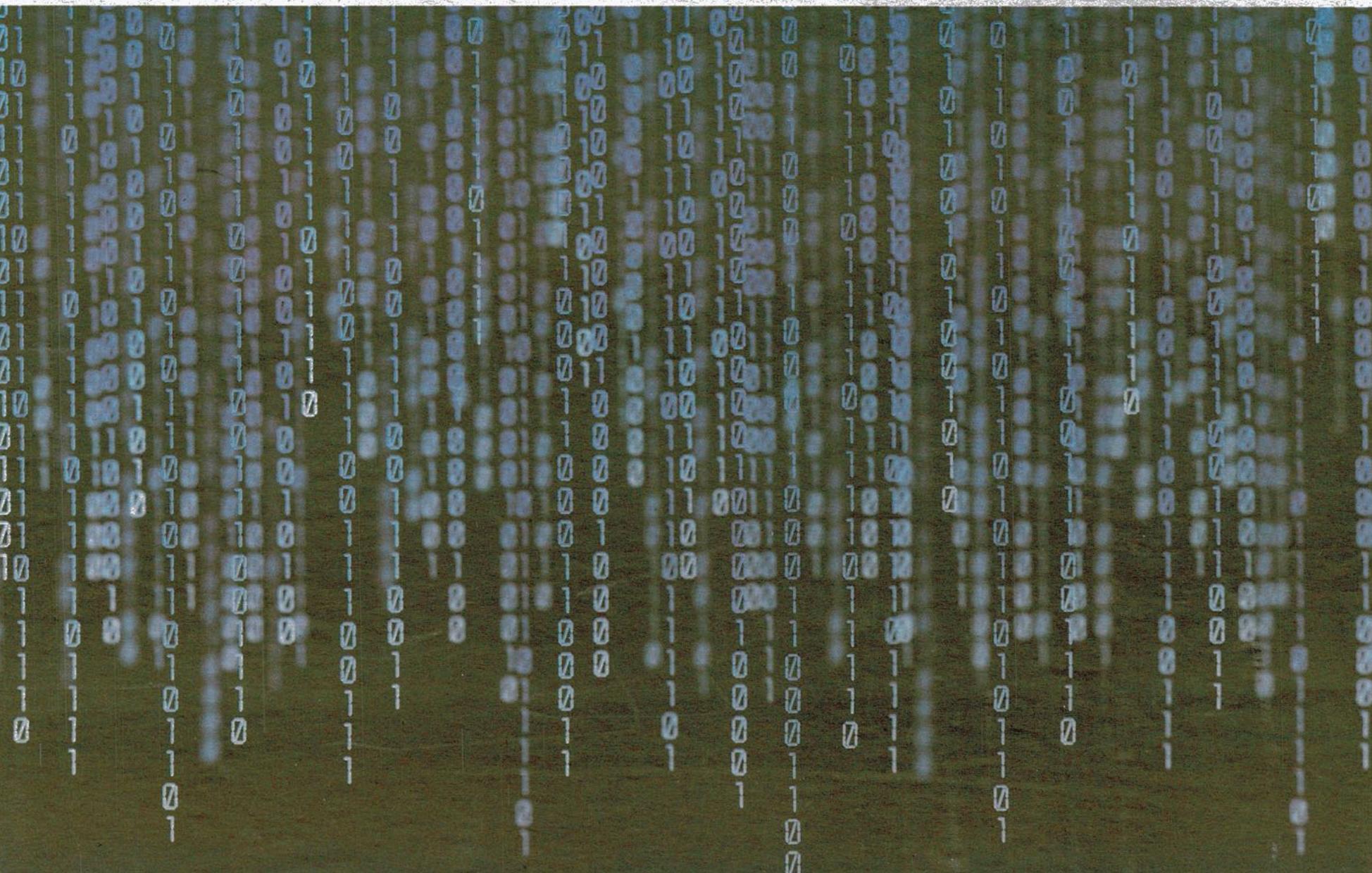
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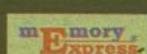
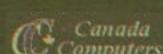
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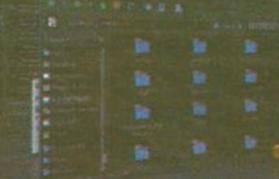
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STAPLES

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27 Atlantic Ave, Toronto, ON, M6K 3E7
Tel: 416-348-9666 Toll-Free: 866-757-0179 Fax: 416-348-9553

EditorDorian Nicholson
dorian@ppublishing.ca**Editor-at-Large**Andrew Moore-Crispin
andrew@ppublishing.ca**Contributing Editors**Gord Goble
Mike Palermo
Marc Saltzman
Chad Sapieha
Aaron Zeitger
Helen Bradley
Simon Bolduc**Advertising Sales**Ontario/Toronto
Karim Rizk
karim@ppublishing.ca
(416) 348-9666 ext. 252

Montréal

(866) 757-0179

Western Canada

Vivian Jin
vivian@ppublishing.ca
(604) 696-1389**Business Group**President
Key Accounts Manager
Scott Piccolo
scott@ppublishing.ca
(416) 348-9666 ext. 222

Art Director

Steve Stoner
steve@ppublishing.ca

Production Co-ordinator

Liz Van der Wee
liz@ppublishing.ca

Webmaster

Duane Hass
webmaster@ppublishing.caOffice Administrator/
AccountingDorina lovescu
dorina@ppublishing.ca

IT Manager

Steve Quinney
steveq@ppublishing.ca

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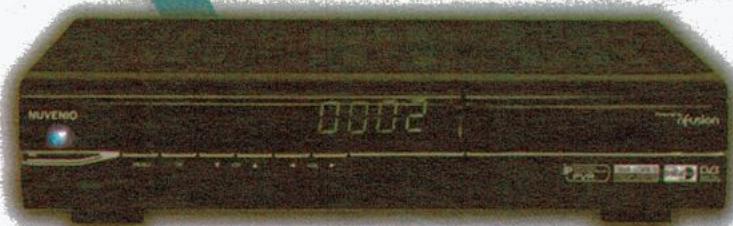
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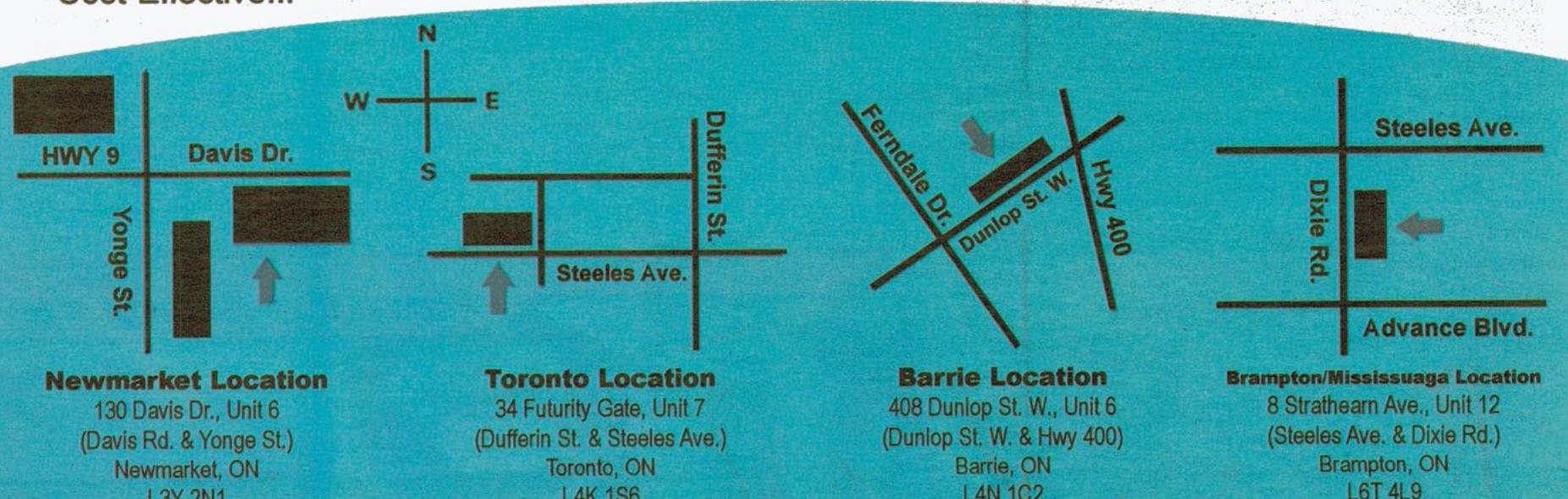


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The Doctor is in

Here's your chance to send your PC woes to our resident Techspert, the HUB PC Doctor

Dear Simon,
Just within the last week I am having difficulties in signing in to Windows Live Hotmail through Internet Explorer. It will no longer remember me even though I checked the box that says remember me on this computer. I must type in ID every time, it is annoying to say the least. I hope you can help.

Thanks,
Irene

Hi Irene,
The following steps should allow you to save your password in Internet Explorer.

1. Start Internet Explorer.
2. On the "Tools" menu, click "Internet Options".
3. On the "Privacy" tab, click "Advanced".
4. Click to select the "Override automatic cookie handling" check box, and then click to select the "Always allow session cookies" check box.
5. Click "OK," and then click "OK" again.

PC Doc

Dear Mr. Simon Bolduc,
I have looked all over web on how to make a booting CD-ROM without success. Also I need a better and more modern version of fdisk. Something that can create and delete partitions, as well as increase or decrease their size. Can you make suggestions? Please kindly advise.

Best Regards,
Jameel

Hi Jameel,
From your previous e-mail I know you use Nero for disc burning. Nero supports creating bootable CDs. There are instructions for Nero 6 and 7 here: <http://www.tacktech.com/display.cfm?ttid=297>. Those instructions may need to be modified if you're using a higher version of Nero.

You can also contact Nero Support for help with this issue. If you have a bootable floppy you could try

ImgBurn which is free (available here: <http://imgburn.com>), and follow the instructions for Bootable Disc here: <http://forum.imgur.com/index.php?showtopic=1779>.

You will need to make an image of the floppy diskette first, by clicking on Extract Boot Image at the bottom of the Bootable Disc tab.

Regarding fdisk, always ensure you have a current backup of all your important data before partitioning your disk. I recommend using GParted which is available for free here: <http://gparted.sourceforge.net/index.php>

PC Doc

Hi there,
Is there any way to get the Windows administrative password without reinstalling the operating system if you've forgotten it? Help if possible please.

Thanks,
Ravinder

Hi Ravinder,
There are several tools available that will allow you to reset your Administrator Password. All of the tools that I have personally used work by booting a CD or floppy diskette and resetting the password offline. A free utility to do this is available here: <http://home.eunet.no/pnordahl/ntpasswd>. When resetting the password it is recommended that you leave the password blank. Then when you start Windows you can assign a password to the administrator account. To do this you may need to start Windows in safe mode. Please ensure you back all your data up before doing this as it is possible to render Windows unbootable. These utilities change the Windows registry, and if anything goes wrong Windows won't boot.

PC Doc

Hi Simon,
I have a problem that no one can seem to solve. I am running XP Pro SP3 and IE 7. I installed AVG 8 a little while ago and now, every time I go to a new website

or even one that hasn't been accessed recently, the screen freezes. It displays the URL address on the bottom left corner and then stops. When I retry the address, it appears just fine most of the time. For instance, when I tried to access mrbass.org/dvdrrip the screen displayed 67.18.155.196 but the site didn't appear. When I retried it appeared just fine. I have tried deactivating the Windows phishing filter and also the AVG Link Scanner and Web Shield but none of these changes have made a difference. I am not saying the fault lies with AVG (they say it doesn't) but I am suspicious.

Any thoughts? Many thanks in advance for your help.
Jim

Hi Jim,
I have a couple of recommendations for you. My first recommendation is to try to reproduce the problem in Firefox, Opera or Google Chrome. If these browsers display the same problem then you know the problem is not limited to Internet Explorer. I recommend using Firefox for day to day browsing, and only using Internet Explorer for sites that require it.

While I've installed AVG on several computers without experiencing the problem that you're encountering you can also try installing a different anti-virus solution. Lately I've been using Avast! free which is available here: www.avast.com/eng/download-avast-home.html. You may also want to ensure that you are running some sort of malware protection like SuperAntiSpyware, with the latest definitions. You can download SuperAntiSpyware here: www.superantispyware.com/download.html

PC Doc

Simon Bolduc is the HUB PC Doctor.
More help can be found online at www.hubcanada.com!

Each month one PC Doc submission will be chosen to receive a copy of McAfee Total Protection 2009. This month's winner is Irene, congratulations!

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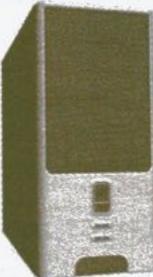
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Intel e7400 Core2Duo™ 2.80Ghz processor • Intel S3200 server motherboard • 2048MB 800MHz DDR2 memory • Four Seagate hard drives: one 160GB for your operating system and programs; three 160GB drives in a protected RAID array for your data • Built-in Intel video controller • Built-in gigabit LAN • Heavy duty power supply • Compact mid-tower chassis • DVD-ROM drive • 3.5" floppy drive • Two year parts and labour limited warranty

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TP-Link Wireless USB WN821n **ME300** 33⁹⁵
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StarTech 10/100 Card ST100S (PCI) 10⁹⁵
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Dlink 8-port 10/100/1000 DGS-1080 60⁹⁵
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Cisco Switch 8-port 10/100/1000 SMCGS 69⁹⁵
Cisco Switch 8-port 10/100/1000 SC2008 74⁹⁵
Dlink Switch 16-port 10/100/1000 DGS-1016D 213⁹⁵
Dlink Switch 24-port 10/100/1000 DGS-1024D 250⁹⁵
Trendnet Switch 16-port 10/100/1000 TEG-S1607X 210⁹⁵
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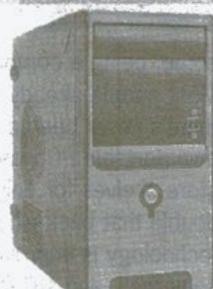
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3.00GHz (1333Mhz, 6mb, E8400) 222⁹⁵
3.16GHz (1333Mhz, 6mb, E8500) 248⁹⁵
3.33GHz (1333Mhz, 6mb, E8600) 349⁹⁵

INTEL CoreQuad Quad Core

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2.50GHz (1333Mhz, 6mb, Q9300) 279⁹⁵
2.83GHz (1333Mhz, 12mb, Q9550) 342⁹⁵
3.0GHz (1333Mhz, 12mb, Q9650) 439⁹⁵

INTEL Core i7 Quad Core

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AMD Athlon64 LE

L1640 Athlon 64 (2.6GHz, 512kb, AM2+) 52⁹⁵
AMD Athlon64 X2 Dual Core

5050e Athlon X2 (2.6GHz, 2mb, AM2) 118⁹⁵
5600 Athlon X2 (2.9GHz, 2mb, AM2) 103⁹⁵

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PNY

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VIEWSONIC

PJ551D DLP Business Unit 1024x768 673⁹⁵

INFOCUS

IN2104 DLP Business Unit 1024x768 831⁹⁵

MITSUBISHI

HC1600 DLP Home Theatre 1280x720 1101⁹⁵

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Stretching the dollar

March is here, some might say finally, and with it comes Spring, season of growth.

And while some might appreciate the sight of plants popping up left, right and centre, it's growth of an economic sort that many are looking for. Economists are still dour when forecasting the future so it's hard to look on the bright side of life without a bit of good news once in a while. Well here's

some: being a computer owner is more affordable than ever.

Most people already have at least one computer in their home, and even if you don't there's never been a more affordable time to buy one, especially if it's a laptop. My own portable PC was bought about two years ago now and it currently appears on store shelves for only \$550. I would be happier about that price if I hadn't paid double that back when I purchased mine, but it just goes to show how rapidly technology is improving and how swiftly prices are falling. It was a good computer back then, and still is after a recent RAM upgrade. RAM, too, has dropped drastically in price. Two 1 GB sticks set me back a little over \$30 recently, and my laptop no longer balks at the site of Windows Vista's welcome screen. A worthy purchase.

But if you're sick of shopping for things — or at least paying for them — then this is the issue for you. You hold, in your hot little hands, our "Free" issue. That is to say that every issue of HUB is free, but this one specifically deals with things that you can get online completely free of charge whether you want to boost productivity or score some frags without paying a cent.

Of course, there is a price to pay even for free software, and we go over that too. Why is it that some software can be downloaded in full without any money down while other software will only allow you limited access to its features? Why do some of these companies ask for donations when they offer their products for free? What's the difference between freeware and open source software? And what the heck is open source software anyway? All these questions and more are answered in the articles within these pages.

We also divert from the norm in this issue in several of the columns. Helen Bradley's monthly column on MS Office is instead dealing with free alternatives to the office software. She goes into detail about the benefits of both OpenOffice.org and Google

Docs, two very useful programs that you can use to create, share and collaborate on documents, or even create tables and spreadsheets. They're surprisingly feature-rich and easy to use for anyone familiar with the MS Office Suite.

Another change this issue is the departure of Editor at Large and Last Byte columnist David Tanaka. While the insight and wisdom that David offered will be sorely missed, we have a welcome addition of sorts. Andrew Moore-Crispin will be rejoining us to take up the Last Byte torch and keep us thinking about how the ever-changing world of technology influences our lives. This month's column deals with how free software can be compared to either free speech or free beer. You can only have it one way or the other so if you're interested, read on.

We also look at what exactly torrents are and why there's such a fuss about them on the Internet these days. With virtually every industry in digital entertainment reeling from the economic blows inflicted by software pirates — from software to video games to movies and music — why is it that torrent sites and the clients that allow torrents to be shared still exist? Learn more in the pages ahead.

Also worth mentioning is Marc Saltzman's list of the best free software applications available today. Check out his article for some invaluable links and suggestions on how you can do more with your computer without paying a dime.

And there you have it. At the tips of your fingers is an entire world of software that is functional and affordable, even if it may not be the David to topple Goliath. Yet while these programs may not be enough to single-handedly overthrow Microsoft or Apple, they are still out there readily available for anyone to download and use, which is almost as good.

So what are you waiting for? Read on and see what you can grab for free without even leaving the house. You'll undoubtedly be thankful if you've never heard of these products before, and those who were on the respective software teams will be thankful, too, since their hard work is being appreciated. So while there may not be any such thing as a free lunch (or free beer) at least there is free software out there to be had.

Enjoy the magazine,
Dorian Nicholson
Editor

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The Feed

from www.hubcanada.com

PPC Introduces Improved HDMI Cables

By Matthew L. Smith

With so many cables and wires coming to and from your plugged-in electronic devices, you may sometimes wonder how you connected all of them to your central entertainment unit in the first place.

Fortunately, HD users can now breathe a small sigh of relief with thanks to a new HDMI cable.

PPC, a leader in the design and manufacture of connectors for various telecommunications, satellite and wireless devices, has announced that they will have the first HDMI locking cable available on the market: the PPC Locking HDMI Cable. The PPC Locking HDMI Cable will support all-digital audio/video interface, providing a connection between any audio/video source such as DVD players and A/V receivers with just one single cable. ve.

www.hubcanada.com/feed/596

Stargazing From Your Chair

By Duane Hass

Do you love to look at the stars, but hate going outside into the frozen winter air to do it? There is a pretty good way around this at <http://www.neave.com/planetarium/> where Flash programmer Paul Neave has created a handy map of the constellations. The application is very easy to use - all you have to do is set your global position by clicking on the handy world map. Once you are oriented, simply click the sky to start or stop moving around. As you move your mouse, your view will change. Pointing at a star will reveal its name, its constellation, its magnitude and its distance.

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Brother Packs it in with All-In-One Printers

By Matthew L. Smith

If you thought owning a wireless all-in-one printer might be too costly, you may want to stop and take a look at what Brother International Corporation has created with the unveiling of their wireless all-in-one printer, the MFC-990CW.

With print, copy, scan and fax features, the new Brother all-in-one colour printer should set a new standard for the home and small business office printing needs. The MFC-990CW is best suited for applications that range from quality business documents to savvy photo printing.

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RAM Boosts Save Money

By Hub Canada

When your computer starts to lag while multi-tasking, it may be a sign that your PC is lacking in RAM. While your first instinct at seeing your computer becoming unresponsive at the sight of three or more applications at once might be to buy a new computer, a less expensive solution to the problem could be to simply buy a new RAM chip and install it yourself.

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HP Adds to the Pavilion Lineup

By Matthew L. Smith

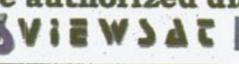
With so many laptops available for all different purposes, looking for an inexpensive but efficient notebook computer that directly suits your needs is a real challenge these days. However, HP has delivered some good news with the addition of not one, but two lines of notebook computers for their customers for added variety, the HP Pavilion dv2 and the HP Pavilion dv3.

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For the full versions of these features, and for more stories on new products, new developments and other breaking news in the high-speed world of technology, go to www.hubcanada.com!

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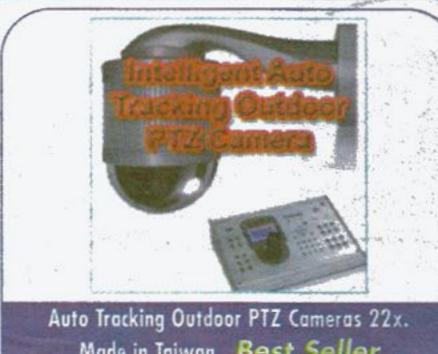


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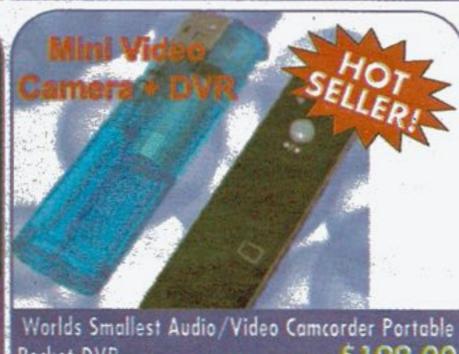
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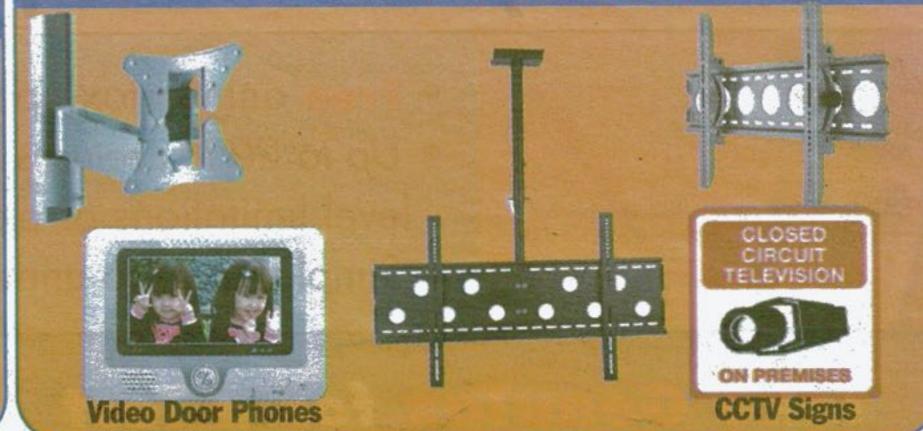


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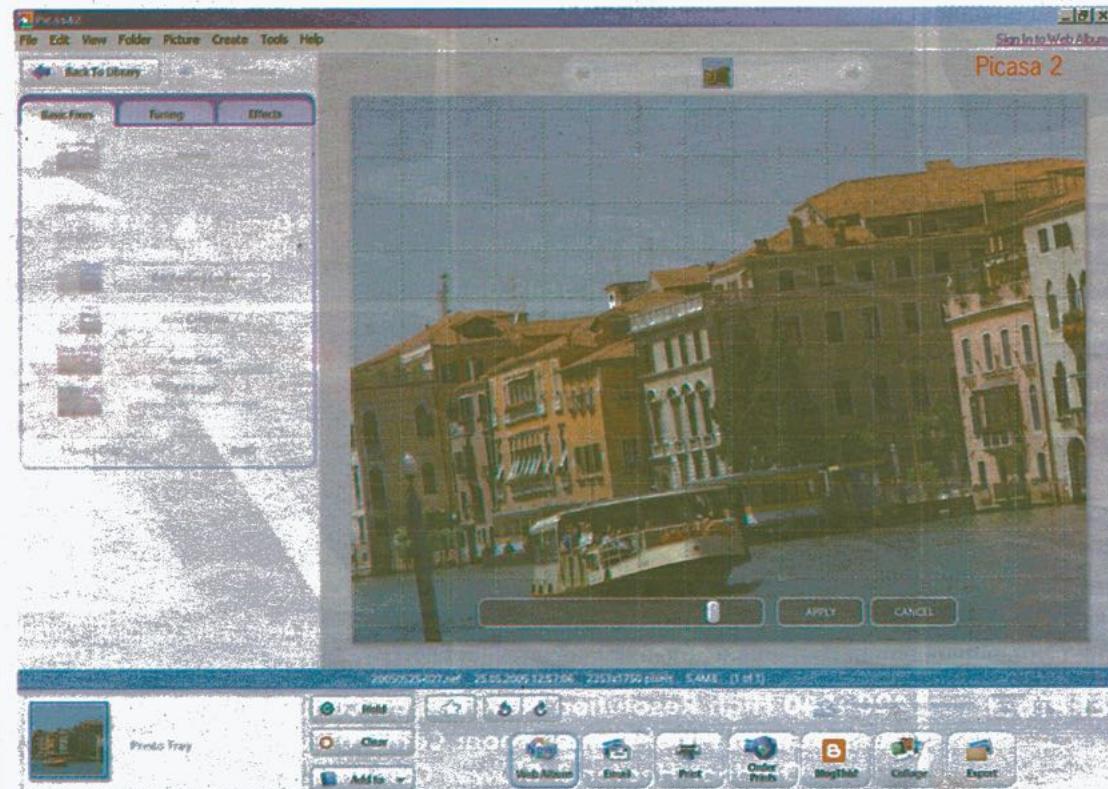
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The Best F-Word for Computer Users

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We know times are tough, friend, but computer users can catch a break by taking advantage of free software and services available in cyberspace — if you know where to look, that is.

You might already know about Google Maps, iTunes and OpenOffice.org (check out the write-up in this issue of HUB), but the following are a handful of other freebies you may not have heard of and reasons why you should care.

Free online storage

We all know it's important to back up your important files on a regular basis — such as irreplaceable photos, camcorder footage or documents — but keeping that burned DVD or external hard drive in the same room as your PC means it's also susceptible to fire, flood or theft.

Instead, Microsoft's little-known Windows Live SkyDrive (skydrive.live.com) offers you 25 gigabytes of free, password-protected online storage space you can access from virtually any Internet-connected computer in the world. You can also choose which files are accessible to your friends — as a convenient way to send someone large files — and which files are just for your eyes.

There's also YouSendit (yousendit.com) and Sendspace.com



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Picasa 3

(sendspace.com), which allow you to send files up to 100 MB or 300 MB in size, respectively. With the former, you can simply visit the YouSendIt.com website (or download the free desktop app or Outlook plug-in), type in someone's e-mail address and attach files from your computer; the recipient then receives an e-mail with a link to download the large files.

Free photo editing

There are many no-cost digital photo tools available, but we've yet to find a more intuitive and powerful (and yet still free) photo management program than Google's revamped Picasa 3 (picasa.google.com). The 9.55 MB download is a breeze to use, offers many editing tools (including exceptional one-click red-eye fix) and the ability to organize and share your photos with ease. Let it search your hard drive and it'll automatically read the date the photos were created and segregate them into a chronological timeline. Cool.

On a related note, Google's online-only Picasa Web Albums service, offers a neat "facial recognition" feature that can find all the photos of the same person for easy tagging.

More advanced users in search of free software might consider GIMP (gimp.org), available for Windows, Mac, Linux and other operating systems. With its customizable interface and powerful editing options, GIMP is ideal for both simple editing tasks — such as retouching, cropping, resizing and conversion — or more sophisticated tasks including heavy image manipulation and effects.

Freedom to Choose:

While we have listed a number of options for each of the categories listed above, there are certainly more to choose from than that.

Below is a short list of websites that will give you the links you need to get the software you want, completely free of charge.

Free Software Directory

directory.fsf.org

Here's a great resource for those looking to find a program in a wide variety of categories from "business and productivity" to "software development" and everything in between.

cnet's Download.com

www.download.com

A good place to go if you need to find a download that you know is free.

Many of the programs you'll find here are complete versions offered free of charge, including most programs listed in this very article.

Tucows

www.tucows.com

Claiming to be "the original software download site," Tucows.com has a history going back long enough to make a decent argument for that point, and a comprehensive list of free software to back it up. Plus, it's based in Canada.



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Windows Defender

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Software Explorer

View or manage important security-related areas of the computer. [Using Software Explorer](#)

Category: [Startup Programs](#)

Name	Classification
MyWebSearch.com	Permitted
My Web Search Bar for Inter... (2)	Permitted
Microsoft Corporation	Permitted
Microsoft Userinit Logon A... (2)	Permitted
Virtual Machine Additions	Permitted
Windows Defender	Permitted

My Web Search Bar for Internet Explorer and FireFox

File Name: m3SrchMn.exe
 Display Name: My Web Search Bar for Internet Explorer and FireFox
 Description: MyWebSearch SearchScope Monitor
 Publisher: MyWebSearch.com
 Digitally Signed By: NOT SIGNED
 File Type: Application
 Startup Value: "C:\PROGRA~1\MYWEBS~1\bar\1\bin\m3SrchMn.exe" /m
 File Path: C:\PROGRA~1\MYWEBS~1\bar\1\bin\m3SrchMn.exe
 File Size: 24672
 File Version: 1, 0, 0, 4
 Date Installed: 3/4/2008 8:04:28 AM
 Startup Type: Registry/ Local Machine
 Location: Software\Microsoft\Windows\CurrentVersion\Run
 Classification: Permitted
 Ships with Operating System: No

Refresh Show for all users Remove Disable Enable

A screenshot of Windows Defender in action

Free music

Just because you're away from your computer doesn't mean it can't be working for you. Music lovers, news junkies or fans of old time radio shows (myself included) can use the free download at MP3Radio.com to record audio from hundreds of online radio stations — even when you're not at home. Simply use the pull-down menu to select a desired station (or add your own) and scheduler like a personal video recorder (PVR) to save an upcoming show to your hard drive, which can then be copied to your iPod.

Similarly, the free downloadable FlyCast (flytunes.fm) application lets you access a never-ending stream of high-quality radio stations, most of which are without commercials and DJ banter. As with the iPhone and BlackBerry apps, simply select a desired music genre — such as rock, pop, hip-hop, country, dance or classical — and within a second or two you'll begin to hear music through your PC speakers or connected headphones. Many of these stations also show you the song and artist info and album art, and in some cases they even let you skip forward or back through the tracks.

Free antivirus and antispyware

Without question, computer users in today's day and age need protection against malicious types in cyberspace. But if you can't afford decent antivirus production, such as the beefy Norton products from Symantec, at least there are a few decent free alternatives.

Good choices include AVG Technologies' AVG Anti-Virus Free Edition (free.grisoft.com) and Avast! Home Edition (avast.com), both of which are available for Windows XP and Windows Vista owners.

If you already have an antivirus program you like, you can pick up free spyware detection and removal tools including Microsoft's Windows Defender (windowsdefender.com) or Lavasoft's Ad-Aware Anniversary Edition (lavasoft.com).

By Marc Saltzman

A screenshot of a web browser displaying the MP3radio.com homepage. The main content features a large banner for 'Radio & MP3 Player' with a woman holding headphones. Below the banner is a section titled 'Check Out Free Crawler Radio & MP3 Player' with several bullet points. To the right, there is a sidebar with a 'TOP 100 Radio' list and a 'TOP 100 MP3' list. The bottom of the page has a 'DOWNLOAD NOW' button and a footer with the text 'MP3radio.com'.



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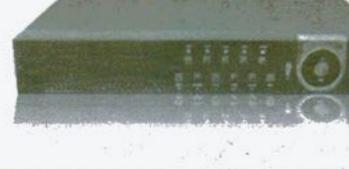
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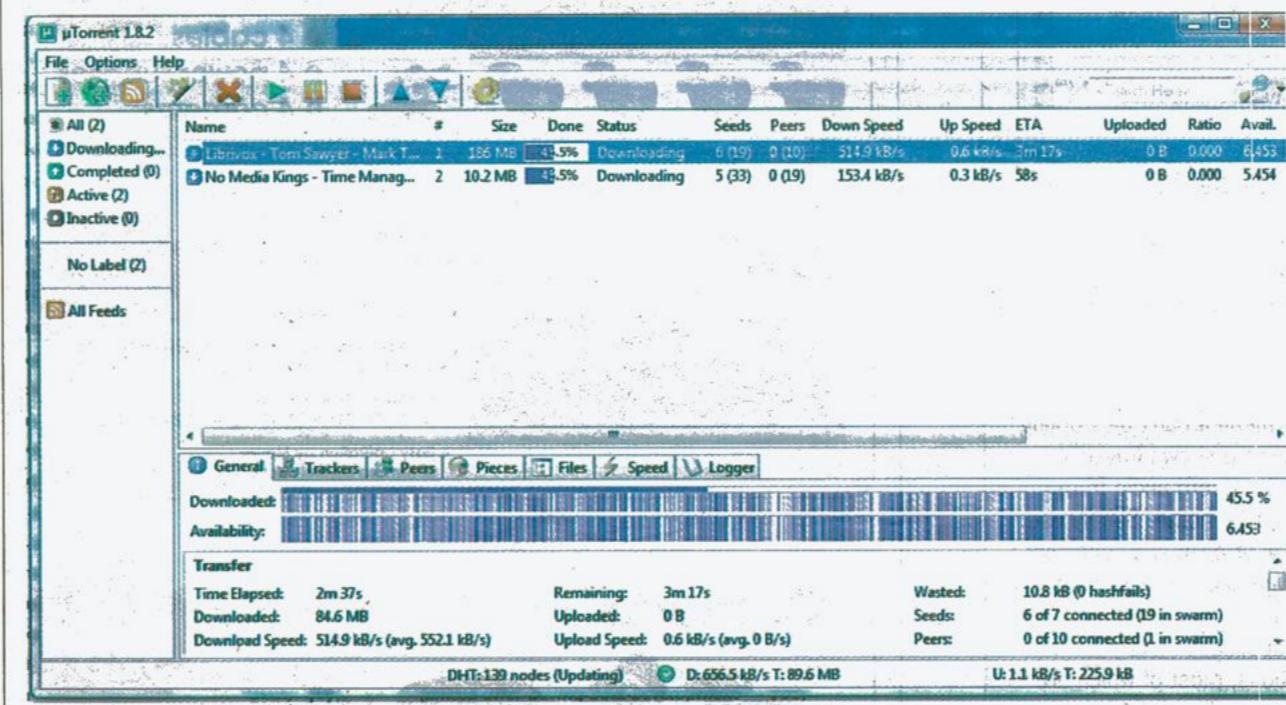


Torrents

The fuss behind the file sharing protocol

A great deal of attention has been paid to torrent files and the how they are shared and distributed over the Internet currently. They've been blamed for leeching the profits of companies involved in all kinds of industries, from the music business — which initially blamed the popular file sharing app Napster for its Internet woes — to

the software companies that have been losing profits due to the ease with which their files have been pirated. But is that directly because of the existence of torrent files? Are they really all bad?



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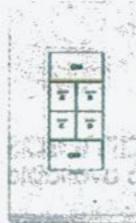
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The background

To begin, one must first realize that torrents are not media files. They aren't even documents. Torrents are simply files — with the extension .torrent — that contain all of the information necessary to acquire another, much larger file, and cannot be used without a client. These torrent clients are P2P programs like the aforementioned Napster and the many file sharing programs that followed that allow users to easily acquire files from the P2P community and just as easily share those files with other users (known as peers). Client programs are what make torrents work; without a client, a torrent is a relatively small file that is completely useless to the average computer user.

However, once a client is downloaded — see sidebar for a partial list of clients — the metadata that the torrent contains is utilized by the client application and the program goes to work downloading the file that corresponds to that particular torrent.

See, inside the torrent file is a whole bunch of information, such as what the file's proper name is, how large it is, how many pieces the file has been divided up into (more on that in a minute) and, most importantly, where the file can be downloaded from. In fact, once a torrent is opened up through the client software, the client will have access to a tracker which contains digital directions to everyone who currently has or is currently downloading that file. This tracker operates remotely for the sole purpose of monitoring where that initial file has spread to and making that torrent file easily accessible to those who are trying to get it through a client.

Sharing with your community

What separates the torrent method of sharing from the method employed by Napster and other programs of the sort is the fact that torrent clients are not exactly made to share files; they're made to share parts of files and then put them together once all the pieces are collected. In the first instances of P2P software, files had to be downloaded in their entirety in order to be made available to other users. If a file was 98 per cent complete it was unrecognizable to any of the other peers and no one could download or search for that partially completed file.

With torrent clients, however, a file can be incomplete and still be shared. This is good for several reasons. For one thing, with the sharing and spreading of files being of an exponential nature, the sharing can be started and completed sooner. If you're sharing your podcast as a torrent file, you don't have to wait to give it to one person, and then for the two of you to give it to two more people and so on. One peer can download a number of parts of your file — let's say five — and then five other peers can also download those parts while that file is incomplete, and then those five people can upload those parts to a number of other peers all across the various clients. At the same time, those peers could be downloading your podcast from a number of other users simultaneously. In this way, by the time five minutes passes after your first full upload, there could theoretically be thousands of people who already have your file in whole or in part, assuming it's that popular.

The downside

Of course, just like many practices that could easily be related to communism, torrent sharing is one of those things that can look good on paper but fail horribly in practice. And, unfortunately, the bulk of those failings come from the fact that, just like many social structures, too much faith is based on fellow humans.

Let's take the previous example of trying to upload a podcast. Once you decide to share your file — known as seeding, for obvious reasons — it may only get picked

up by one peer. That peer could download your file completely, thus having the ability to become a seed themselves. But, instead of practicing the philosophy or share and share alike, this user decides to turn off uploads and refuses to seed your file, thus becoming a leecher. This is another term that's easy to interpret, as leechers take whatever they can get and give nothing in return.

Many clients attempt to minimize the negative effects of leechers by encouraging equal file sharing. A ratio must be maintained between a user's downloads and a user's uploads, and if that ratio is not 1:1 (or whatever is set or expected) then certain penalties may come into play. Some of these may be user- or community-enforced, such as refusing to share with apparent leechers, and some may be client-enforced, like when limitations are placed on downloads or download speed until the correct ratio is met.

Another problem is the fact that sometimes torrent files can be so large or so rarely seeded that a significant portion of them is difficult to find. Numerous attempts to download a file can result in only getting to 98 or 99 per cent completion. The problem here is that the original seeders of the torrent have disappeared, or the ones currently available also have incomplete files or are simply refusing to share. And, since torrent files are broken up the way they are, it's currently impossible to stream audio or video without having the whole file.

Legal issues

A popular example of how incomplete torrent files frustrated users or torrent clients occurred when a sabotaged torrent linking to the popular HBO series *Rome* was made available. This torrent file was actually distributed — and tampered with — by HBO itself, after the company decided that the best way to combat the illegal sharing of its historical drama was by creating and seeding flawed copies of the shows that would never prove any use to anyone.

Of course, the much larger issue in that example isn't the fact that HBO was distributing files that weren't of sound quality and had been deliberately corrupted (which is wrong on a community level, at least) but the fact that a company that had put millions upon millions of dollars into producing a series was now losing duly deserved profits to Internet pirates (which is wrong on a great number of levels). And that's no laughing matter.

One frequently used site to find torrents is the Canadian site, isohunt.com. That site is run by a Canadian by the name of Gary Fung, a man who has been threatened repeatedly by the Motion Picture Association of America (the MPAA) and the Canadian Recording Industry Association (CRIA) for various charges, including copyright infringement. The matter is still in the air but Fung faces serious opposition with deep pockets and expensive lawyers. While it is true that neither Fung nor isohunt distributes copyrighted material (as torrents themselves are not copyrighted material) the site does make it possible for many to acquire files that aren't exactly legal and then distribute those files to others, and thus cuts into the profits of some of the major companies out there.

While the average seeder would not receive much if any attention from these groups, it is important to note that they are serious about preserving their industry and that piracy is a crime.

Of great power and great responsibility

Obviously the best way to avoid unnecessary attention by the fat cats, the law, or the Man (whatever you want to call your oppressors is fine by me) is to simply avoid their game and stick to the legal downloads. Torrent clients are a wonderful way to share your files quickly, easily, and with a tremendously large audience. And besides that, if you're not feeling creative, you can download a whole assortment of perfectly legal files for free and then share those with the rest of your peers. If you don't like a file, don't share it and instead share the ones you do like and that way content (such as your band's latest garage session) can be passed along accordingly.

Just don't be a leech, and unless you like walking planks, don't be a pirate.

By Dorian Nicholson

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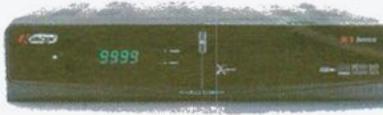
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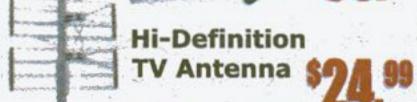
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1. Educate yourself about online hazards, and set clear rules for family Internet use
Websites such as Kids In The Know (www.kidsintheknow.ca/app/en), or Cybertip.ca (www.cybertip.ca/app/en) provide a range of age-appropriate strategies and tools for parents and teachers to apply to young people's Internet use.

2. Tell your children up front that what they do online is not private

People who your children don't know are viewing some or all of your children's participation in chat rooms, blogs, social networking sites such as FaceBook, Twitter or MySpace, etc. It's your duty as a parent to educate your children about online hazards, and to protect them.

3. Internet use by family members will be a supervised activity

Rules will be set in terms of amount of time online, kinds of activities and kinds of Internet content. Internet use will be subject to safety rules in terms of inappropriate or dangerous activities. If children commit to use the Internet safely and responsibly, they will earn your trust.

4. Understand that Internet savvy kids are way ahead of you, and you must catch up

In a recent study, 32 per cent of online teens stated they clear their browser history at the end of an online session, to "cover their tracks" about where they have been and what they've been doing. Sixteen per cent of online teens admitted creating private e-mail addresses or social networking profiles.

5. If there is any violation of the safe Internet rules, then use will be restricted

For example, computers will not be allowed in children's bedrooms, but rather will be kept in the "public" parts of the house such as living room, den or kitchen. The object is to encourage safe Internet use, which would perhaps motivate the child to find a way to go online from a location outside the home.

6. Use Antivirus, Parental Control and Firewall Software

Install and regularly update a full-featured Internet security software package, which includes parental controls (which limit the range of content the child can access) virus detection, anti-phishing and spam e-mail filtering, and firewall features.

7. Check websites that your children have created, or which they visit

Remarkably large numbers of children and teens assume that sharing photos, personal history and physical descriptions is harmless. According to one recent study, 32 per cent of online teen girls have given out a photo or physical description of themselves to someone they don't know.

8. Monitor webcam use

Online predators attempt to make contact with children who have access to webcams. Ensure that you know who is connecting via webcam with your child, and for what purpose.

9. Emphasize the Positive

Work with your children to develop a beneficial online aspect of family life by communicating with friends and family, exploring the online world library, enriching personal education and developing hobbies and skills.

10. Continue to educate yourself and your children

Internet content and technology is constantly changing. Treat change as an opportunity to increase the benefits of technology to you and your children's lives.

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Paul Comessotti, Canadian Country Manager
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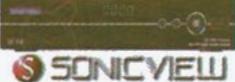
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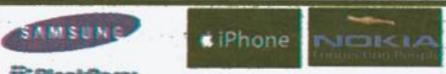
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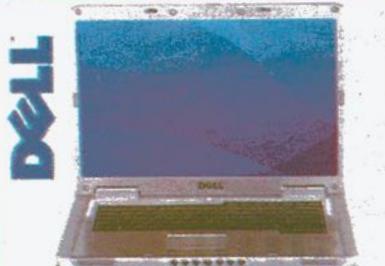
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Free Office Applications

A quick introduction to two free alternatives to Microsoft Office



While Microsoft Office remains the most widely used Office application it is not the only office program available. There are some extremely good free and open source applications that you can use and two of the more popular are OpenOffice.org and Google Docs. While each of these programs operates from a different model — one is used predominantly online and the other is offline — each offers the home and business user a suite of applications capable of handling most everyday office needs.

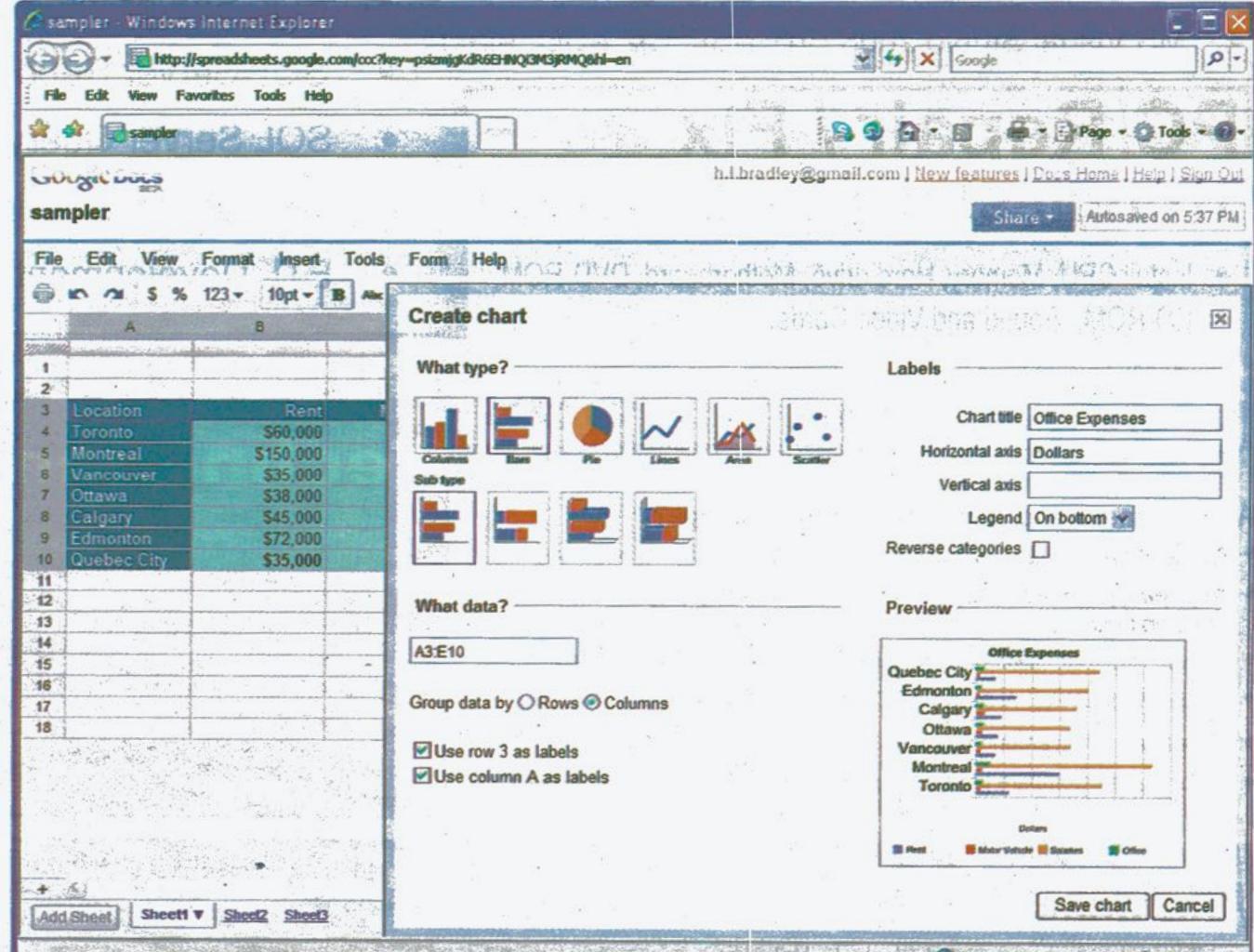
Google's free office suite

Google Docs which is provided free from Google can be found at docs.google.com. It is an online office application which has modules for word processing as well as creating spreadsheets and presentations. It also teams up with Gmail to offer a mail application. You use Google Docs online so it is of most value to somebody who has a low-cost Internet service allowing uninterrupted Internet access or for using when you're on the road and need to create a quick document or spreadsheet.

One of the benefits of Google Docs is that because it's an online application your documents are stored online so that they're easily accessible whenever you need them. You can also share your documents and get access to other people's Google Docs documents so that you can work collaboratively on a project using this program. If desired, Google Docs documents can be downloaded to your computer for further processing. You can, for example, export your spreadsheets in XLS, PDF and ODS formats compatible with programs like Excel and OpenOffice.org. Likewise Writer documents can be exported in PDF, RTF, Word, OpenOffice and other formats and presentations can be downloaded as PDF or PowerPoint PPT files.

There are lots of online templates available to help you quick start creating a range of typical business documents and spreadsheets and the collection is growing. Like Microsoft templates these are rated by other users so it's easy to find the best templates for any given task.

Each of the Google Docs programs include all the basic tools that you're used to having in any spreadsheet, presentations and word processing program. For example, you can create charts from your spreadsheet data, add headers and footers to a document and include pictures in it. However, there are also features unique to Google Docs such as the ability to create Gadgets that will sit on your website or blog and display data from a worksheet, and the ability to use functions such as Google Finance to import current



It's easy to create a good looking chart for a Google Docs spreadsheet.

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Spring Photo Contest!

March may come in like a lamb and out like a lion, but on the bright side we've got another contest to take your mind off of the frigid temperatures of late and get you looking forward to getting out into the sun. As the beauty of spring begins to show itself from beneath the slowly warming landscape, HUB: The Computer Paper is having another photo contest!

The contest theme? Spring to Life — capture a moment of vibrant energy where life is just starting to pick up speed. The subject can be a rural landscape, urban rejuvenation, or life in bloom (nature or people). After being cooped up for most of the winter trying to avoid the cold and flu season, who could resist getting outside to snap some shots?



Please submit all entries to contest@ppublishing.ca. Deadline for submissions is April 20, 2009.

For the winner of this contest we have a copy of Adobe Photoshop Elements 7 with Premiere Elements 7, plus more prizes to be announced for the runners up.

Go to www.hubcanada.com for prize and contest details!



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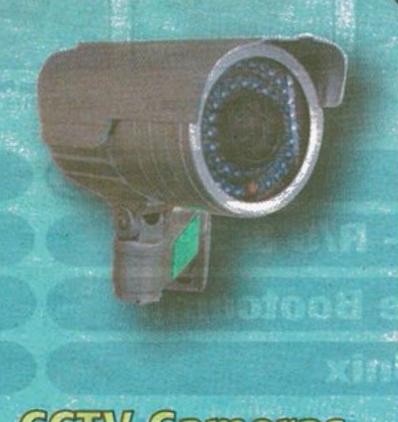


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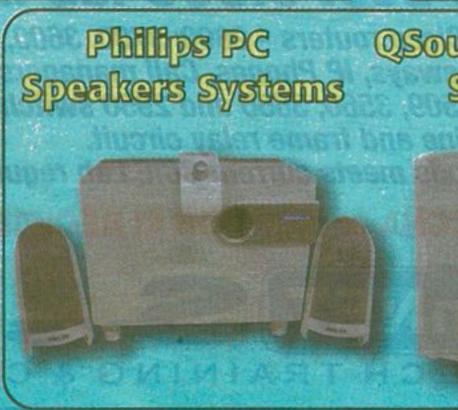
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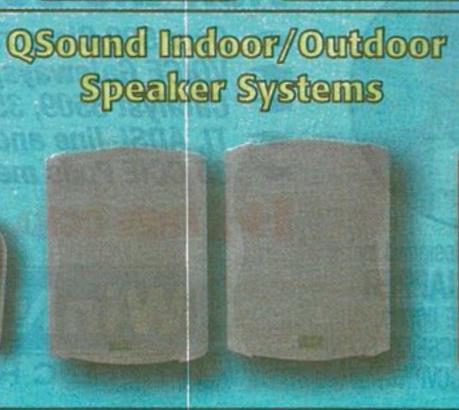
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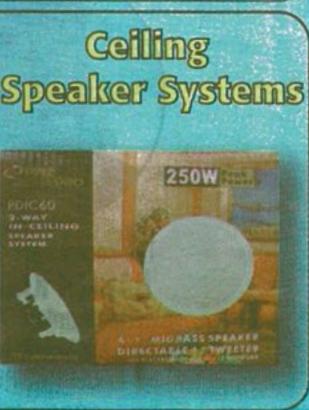
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Google Docs lets you store your documents on the web and they can be shared and even be used with others for collaborative work.

share-market data into your worksheet. There is also a tool for creating a form inside a spreadsheet which you can populate with various questions and e-mail to others. You can then collect the responses for analysis in that spreadsheet.

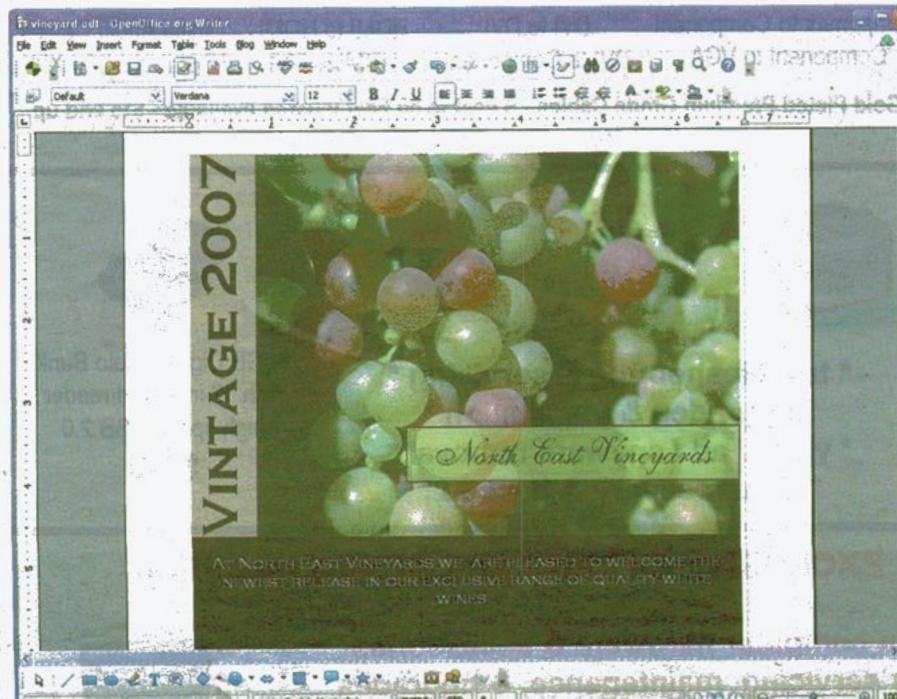
One other feature unique to Google Docs is the ability to e-mail a message or attachment to a Gmail account and to have it automatically created as a Google Docs document. Even if you don't have a Gmail account you're given a special e-mail address you can use to do this.

Open Source OpenOffice.org

OpenOffice.org (from openoffice.org), is a downloadable open source application which you install on your computer and which is particularly useful in situations where you want to work offline. Because it can be run on a number of different operating systems it is great when you work with others in an office where different operating systems are in use as everyone can use the same application.

OpenOffice.org is also available in a portable format that you can download and install on, for example, a Flash USB drive and which you can take with you and run from that drive on any computer.

The program includes a spreadsheet, word processor, presentations and drawing package as well as a database and math program. The program works very similarly



Some of the tools in OpenOffice.org are more powerful and complex than those you'll find in the web-based Google Docs.

to programs like those in the Microsoft Office suite (versions 2003 and earlier), and if you're used to using those programs you should have no problems at all with OpenOffice.org. The Database feature can be used together with the Writer tool to create databases that you can use to store information and to create queries and reports from it. Similarly, you can use an OpenOffice.org spreadsheet or database as the basis for a mail merge solution allowing you to personalise and send a single letter to lots of different recipients.

One nice feature about OpenOffice.org is that it allows you to save your documents in the PDF format so you can easily create documents for distribution on the web and via e-mail. You can also use the word processor, for example, to create web pages.

Because OpenOffice.org is run from your computer and not in a web browser, it isn't limited in features and behaviour by having to be browser compliant. This means that it offers more sophisticated features such as being able to use more fonts, create shapes and fine-tune their size and placement. So, if you're working on complex documents such as flyers and brochures where accurate placement of objects on the page is required, OpenOffice.org is a viable alternative to using a program like Microsoft Word or even Publisher. That said, if your needs are relatively simple and straightforward and you don't need anything too complex then Google Docs may be all that you need to do your work.

Each of these programs is free to download or free to use and because their formats are easily convertible from one program to the other why not give each of them a try? Test them to see if the features that they offer meet your needs – if they do – you'll might just have found a no-cost alternative to Microsoft Office.

By Helen Bradley

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QuakeLive

Where fragging becomes free-for-all



When talking about free software people often refer to open-source alternatives like Linux or OpenOffice, but what's surprising is how much entertainment can also be supplied through free software. As the cost of processing power, bandwidth, and capacity decrease, the opportunity to support free games becomes not only increasingly viable, but also surprisingly lucrative. Easily the most substantial and best applied example of the principle is id software's recent QuakeLive project. If you recognize the name, it's because this is the same id software that singlehandedly made the first-person genre what it is today while simultaneously being at the forefront of graphics technology for the past 15 years.

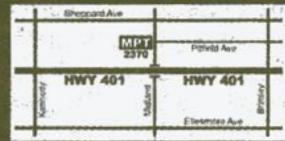
What is it?

Simply put, QuakeLive is everything from Quake 3 Arena and Quake 3 Team Arena compiled in one packaged and delivered — for free — through your web browser. The original Q3A was released almost 10 years ago, in December 1999, and was one of the first multiplayer-only first-person shooter games aimed squarely at the competitive gaming community (which was coming into fruition at that time.). Id's John Carmack — the co-founder and programming genius extraordinaire responsible for much of the company's success — has claimed that "it's the purest game id software has ever created."

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To this day, Q3A is still played at hardcore gaming competitions across the world. Along with helping to increase the popularity of competitive electronic sports as a whole, it was also the game that launched Johnathan "Fatal1ty" Wendel's career. But rather than just repackaging two of their existing games, id software decided to make the web page an integral part of the entire QuakeLive experience, adding massive amounts of functionality to what was already an incredibly stellar package.

If id manages to achieve half their vision (and I'm inclined to believe they will), QuakeLive.com won't just be a site that you use to launch the free game, but your headquarters for everything eSports. The beta site has already hosted a number of free-to-join tournaments and sponsored events (Intel gave away \$25,000 in a tournament held last month) and has a number of community-specific features helping to round out and upgrade the game. Matchmaking between equally skilled players, friend lists, stats tracking, chatting tools, tournament creation, and more will be available to all users completely free of charge.

What about cashflow?

While it seems straightforward, id software fully expects the initiative to be profitable solely through the use of on-site and in-game advertising. The key, as mentioned earlier, is that in the long term the cost of running the site (the bandwidth, processing, and capacity) will be so cheap that it will, in effect, have zero marginal cost.

Id software has utilized the advertising company IGA Worldwide's proprietary software development kit to supply their core advertising technology. IGA's services do not require any client side downloading or file installation so all of this is completely seamless and unobtrusive to the end-user, essentially making it a win-win situation.

The beauty of this methodology is that even though they expect to make money off of the advertisements alone, there's nothing stopping them from creating multiple revenue streams in the future through additional means. Client data collection, customer-specific ad targeting, sponsorships, cross-subsidies and so forth... think of everything we see Google doing, but applied to a Quake 3 Arena based web page.

Probably the biggest piece of the puzzle, and the main reason why I think QuakeLive will be incredibly successful, is that the game that it's based on is the ideal candidate for this test of sustainability. Out of the gate, Quake 3 Arena already has a massive

following and a good-sized chunk of popularity that has propagated over the past decade.

The perfect candidate

Conversely, the QuakeLive initiative will be considerably low-risk for id software (retail sales of Quake 3 Arena are no longer what they were 10 or even five years ago), yet it could yield massive results from a revenue standpoint.

New video games, especially PC games, generally require quite powerful hardware. This is especially true for competitive, multiplayer first-person shooter games, where frame rate is of the utmost importance (anything less than 60 fps is a major Achilles heel). However, Quake 3 Arena, while still retaining everything that makes the original fun, has been out for almost 10 years — in other words, it has aged extraordinarily well. And along with being ageless, QuakeLive runs fluidly on almost any PC made after 2000. I've been playing the QuakeLive beta on my laptop's abysmal Intel GMA950 integrated graphics at 1440 by 900 with all the settings maxed, and I'm still able to top out my screen's 60 Hz refresh rate... Not bad!

The low requirements, high quality, and online/multiplayer-focus of QuakeLive make it well suited for a game that is aimed at the masses; it's fast, easy to use, has gameplay that's proven to be awesome and, most importantly, it's free. There is no reason why gamers shouldn't try out the game when it officially launches, since you'll have absolutely nothing to lose. And for id software, having more people that can play it translates into a much broader sales market.

Wave of the future

So are free games the future or is this just id software's mad science project? In all honesty, QuakeLive will, at most, simply prove that there is room in the industry for this type of business model. In fact, QuakeLive isn't even the first game to be offered free of charge, but it is arguably one of the biggest and most renowned.

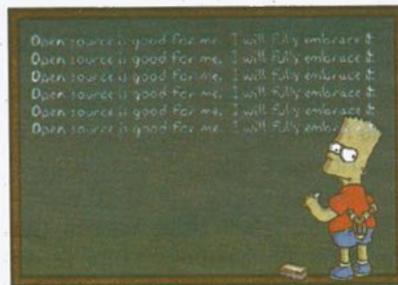
Naturally, I'm a bit skeptical that companies will opt to release their latest and greatest games for free, but what could be just as cool is if developers' older games were retrofitted to include in-game advertising and then re-released, for free, a few years later after retail sales die down? Until then, however, I'll just keep improving my stats and fraggin' away in QuakeLive.

By Mike Palermo



An Open Source Primer

Debunking the myths surrounding what "open source" really means



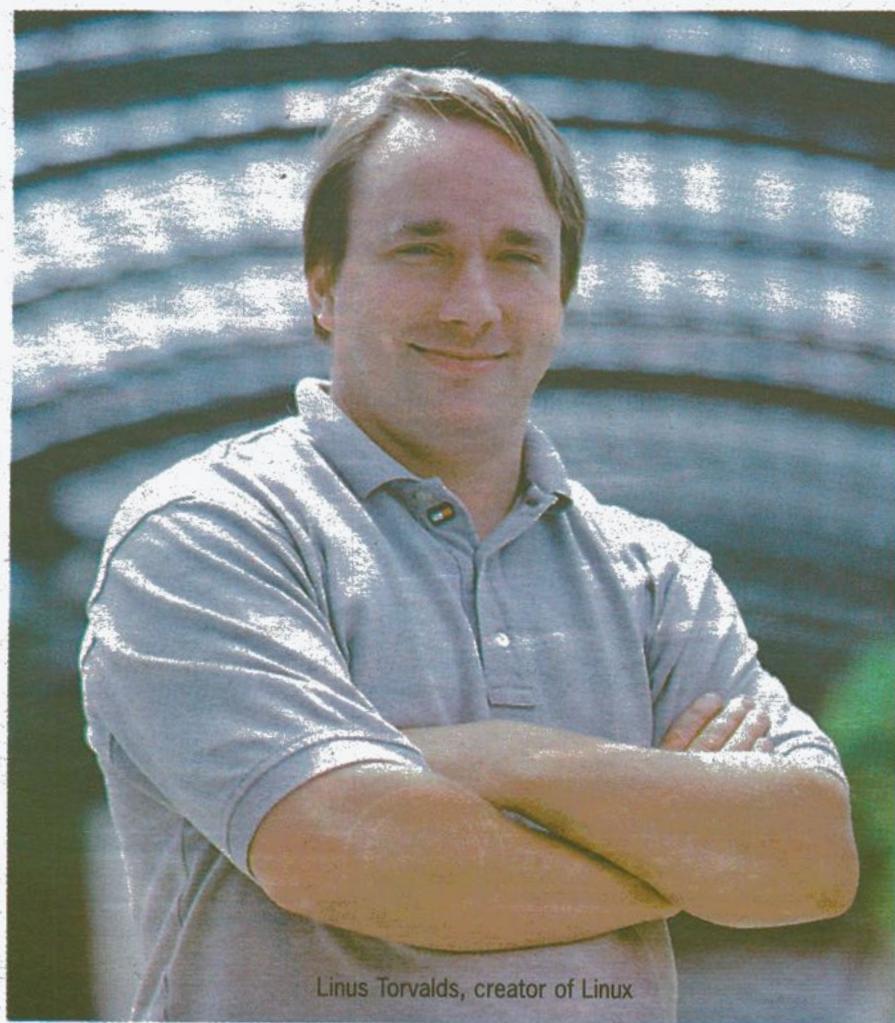
Like many of us who've never really looked beyond mainstream software available through traditional retail channels, I'd always thought of "open source" as a bit of a mystery. I'd heard of it, sure, and I'd even paid enough attention to know open source had permeated virtually every nook and cranny of the software world. There were open source operating systems, open source word processing and spreadsheet software and even open source games. Nevertheless, I continued to treat it like I treat that new next door neighbor who keeps saying hello — though he's probably a perfectly decent guy, I felt relatively comfortable with the neighbours and friends I already had.

And really, wasn't open source software free? How in the world could freebie software do the job of stuff that costs me hundreds of dollars every few years? And wasn't it incompatible with big-ticket software? And wasn't it the product of anti-establishment, rule-flaunting, communist hippies? And wasn't it true that if I somehow got past its frightening unfamiliarity and began regularly using it, Microsoft would somehow find out and inflict grievous harm upon either me or my computer?

In order to decide if open source was, at least in part, right for me, I knew I needed a better understanding of it. I knew I had to separate the fact from the fiction. And that lead me to assembling a little something I like to call The Top Myths of Open Source.

Myth Number One: The term "open source" simply means free software.

False. Certainly open source software is, for the most part, distributed and available



Linus Torvalds, creator of Linux

at no charge. But that's just part of the equation. Indeed, the real thrust behind open source software is just that — it's open source. In other words, its source code is open for customization and modification by anyone who wants to do so.

Say, for example, you developed a really cool software application that sorts widgets from doohickeys, and you wanted to share it with the world. You would first write and then compile your software, which in essence allows computers to understand it. But compiling it also tends to scramble it about in such a way that the source code — the programming statements you created — becomes indecipherable to other humans.

Thusly, if someone wanted to look at the way you put it together, it would be almost impossible for them to do so. This is the concept utilized by commercial "closed source" software developers such as Microsoft, Apple, Norton, and Intuit to ensure their products remain fully within their control. And comparatively expensive.

But what if you felt your software might benefit from the input of another interested party? What if, rather than hiding the machinery behind your work, you wanted to expose it so others could improve upon it? You would then make it available not only with its compiled code, but also with its source code. And it would be a prime example of open source software.

Myth Number Two: Open source software doesn't stack up to closed source software

Uncertain. From a quality standpoint, it would seem to make sense that a "finished" product, developed by paid employees in a controlled environment, tested in an extensive beta program, and marketed professionally, would deliver a superior experience than a hunk of software that may well have come from the minds of a few hobbyists and has been circulating around the Internet, falling into the hands of God knows who.

Moreover, what of support? What if you have a question about the product or believe it isn't working properly? When you buy something off the shelf, chances are you're also buying some form of support. You'll generally also receive some form of printed documentation, and a warranty. Conversely, open source software, seeing that it can be altered so much, usually comes with limited or no support whatsoever. But there are arguments — valid arguments — in the other direction. By the very nature of open source software, it is constantly evolving. It's in the public's hands to be modified, repaired, debugged and improved. Thusly, the longer a given application has been in circulation, the better and more efficient it theoretically should become.

Stability and security?

As for straight-up bugs, the truth is that many commercial software houses are up against such tight deadlines that bugs inevitably make it through to the final product. One look at the sheer number of post-release bug fixes in virtually any Microsoft product is proof enough that infallible software is the stuff of wishful thinking. Open source software isn't normally fighting such unrealistic release dates.

Security is another issue. If the source code of open source software is so readily available, isn't it easier for malicious types to do their dirty work there rather than in the cryptic world of closed source? It would seem to be that way, though proponents of open source maintain that because it's open source, a wide variety of people are working on security holes all the time.

Why then does closed source, proprietary software such as Windows seemingly have so many security breaches? Two reasons, really. First of all, most top-level hackers and virus writers are adept at plowing through the lines of defences that closed source software puts up. But just as importantly, they enjoy being noticed. And where else can their foul deeds have more negative impact than in the world's most popular OS.

Myth Number Three: Closed source = paid, open source = free

False, though we can see why you might think that way. Look at games, for example. Freebie games developed in closed source environments are everywhere. Freebie games developed as open source are also everywhere. There's certainly no distinction here.

Now have a look at Linux, the open source world's premier operating system. Though most users have adopted it at absolutely no charge, many other users have opted to go the Red Hat route, paying the self-described "world's leading open source technology solutions provider" not for the OS itself, but for the support and the documentation Red Hat offers.

Myth Number Four: This open source stuff is all so new

False. In the beginning — that is, in the days before PCs — there was nothing but open source. The idea of proprietary software came much later.

And check out the lineage of today's hottest open source apps. Linux was born way back in 1991 at the hands of Finnish computer student Linus Torvalds, and has since spawned numerous derivative operating systems. Open Office, open source's answer to Microsoft's Office, debuted at the turn of the millennium. And Firefox, the leading open source Web Browser (which, in January of this year, owned 21.5 per cent of the total browser market) is already six years old.

Myth Number Five: Mainstream commercial software is much more popular and therefore the better choice for me.

Uncertain. Microsoft's Windows is undeniably more popular than Linux — staggeringly so, according to recent market surveys — but getting an accurate feel of the Linux share is difficult because users aren't mandated to register their copies. Furthermore, so many PCs and laptops are bundled with Microsoft products that few users will ever stray away from the familiarity. Nonetheless, this level of closed source/commercial dominance is repeated in virtually every facet of the industry.

But just because it's more popular, does that make it better? That really depends on the individual user. For the most part, those who are more comfortable in the computer environment may prefer commercially available closed source products if just for their comparative ease of use. Even a glance at the names of the applications on the open source side — which often incorporate abbreviations and cryptic, consonant-laden descriptors that seem like refugees from a sci-fi flick — brings confusion. And let's face it, the folks at Apple have carved out a pretty good living all these many years by making the computing experience as layman-friendly as possible.

There is, however, something to be said for no-charge or low-charge software. There's also something to be said for the principles of open source and the community that exists because of it. Fight the power, baby!

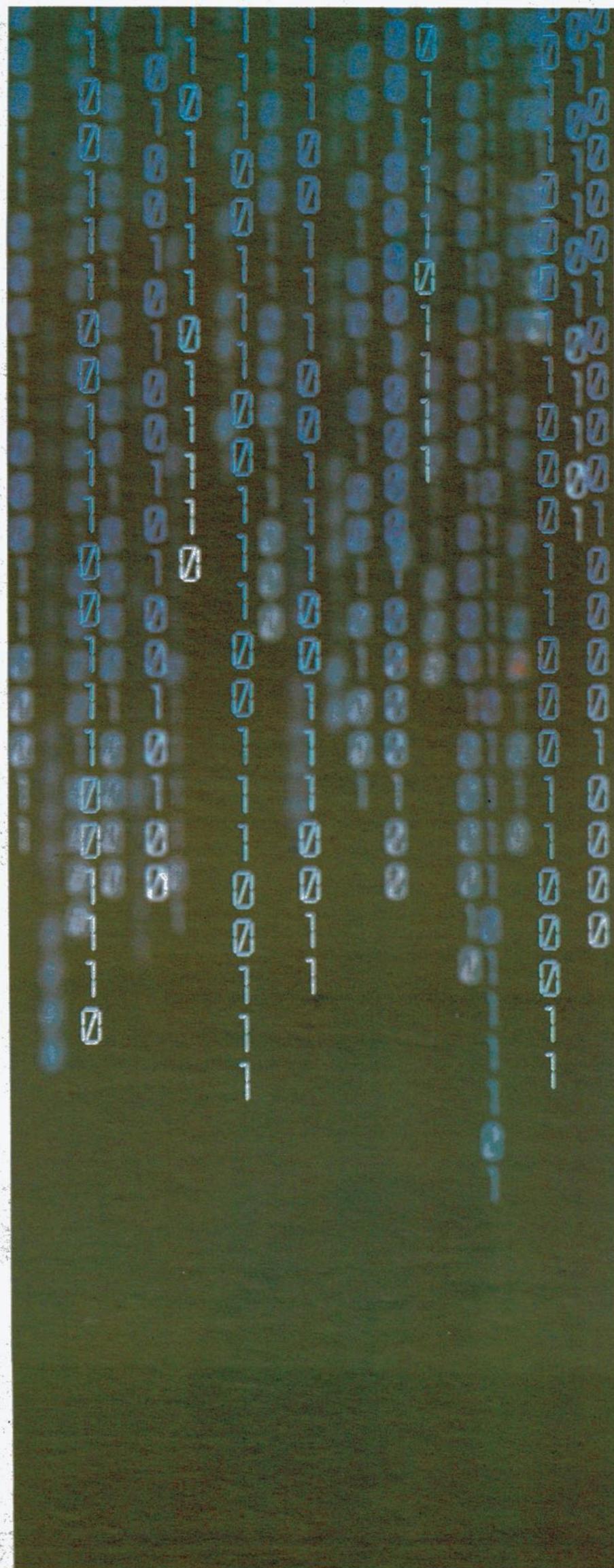
Conclusion

Having said all that, open source is making tangible gains on some fronts. For example, many of those new, low-cost, low-power mini-laptops you seem to see everywhere these days are bundled with Linux, as a cost and bloat-saving measure. Moreover, Open source's Firefox Internet browser comes out ahead in numerous head-to-head performance showdowns with Windows Explorer, as does Open Office when pitted against Microsoft's Office. Hardcore gamers, meanwhile — and we're referring to those who blow heavy dough on the latest and greatest high-end games and the machines to run them — will likely need a Windows or a dual-boot system in order to keep themselves fully placated.

I may well adopt Firefox in the near-future as my browser of choice. It's smaller and seemingly faster than the rapidly expanding Explorer. I might even look toward Open Office when it comes time to upgrade from Office 2007, though, being one of those hardcore gamers, I'll likely stick with Windows for some time to come. Fear of the unknown? Maybe, though I'm certainly not ready to fill Microsoft's coffers again anytime soon. I'm still running XP and probably will continue to do so until I'm convinced Microsoft has come up with something better.

One thing is certain. I'll no longer ignore open source software and I'll no longer consider it a quirky sidebar best reserved for total geeks. I have seen the light.

By Gord Goble



Peripheral Vision

A PC peripherals buyer's guide

It's not time for a full PC upgrade just yet but the love you felt for your once shiny new PC this time last year has faded. Time for the computing equivalent of a marital aid. A slick new keyboard, big bright LCD monitor, a sleek wireless mouse, a web cam, a wireless headset or a nice set of speakers can go a long way to reigniting your love affair with your formerly cutting edge machine. And when it does come time for an upgrade, your new peripherals come along for the ride.

LCD monitor

A big LCD monitor is one of the best PC investments you can make. A monitor that's 20-inches or better — we prefer 24-inch wide screens — allows you to crank out that college paper in style. You can have a research web browser open on one side of your desktop and still have screen real estate left over for a Word document where you artfully reword that Wikipedia article.

The Samsung SyncMaster 2493HM (~\$400) is a great example. With its 5 ms

response time it's well suited to fast action in games and movies. Its HDMI in, integrated speakers and 1080p (1920 x1200) full HD native resolution mean it can work as a desktop HDTV too. Add to that a good 1,000:1 contrast ratio and adequate 400cd/m² brightness and it's a good all-rounder. Its 10,000:1 "dynamic contrast" ratio is harder to measure but basically means that the panel dials down the back light brightness by area to display blacker blacks and dials it up to show whiter whites.

Samsung's SyncMaster 2493HM



Keyboard

The most important factors when looking at a keyboard are comfort, noise and any extra features it includes.

Ergonomic keyboards put your hands in a more natural position tilting your fingers about 30 degrees. However, this ergonomic benefit comes with a fairly steep learning curve. Personal preference goes to the less severe 15-20 degree raking of ergonomic, but not fully so, keyboards.

Noise may or may not be an issue for you; if you work in an otherwise quiet environment though the click-clack of a cheap-o keyboard can get irritating. For you possibly, sure, but mostly for those around you.

Consider too that increasingly, keyboards offer an array of usability and media keys; shortcuts for common web browsing actions, hot buttons for launching your chosen media player, volume controls and so on.

We like the Microsoft Natural Ergonomic Keyboard 4000 (~\$60). With its raked keys, media shortcuts, comfortable wrist rest and quiet key action, we're willing to forgive that it's not wireless.

Microsoft's Explorer Mouse



Tablet or trackball

Tablets are great for refined control in image editing and other applications, and the pen interface is much more natural for some. If it's a tablet you want, your only real option is something from Wacom. If you're a budding photophile or just looking to use some of Windows Vista's built-in tablet features, the Wacom Bamboo Fun Small (~\$115) is a good place to start. Further up the line things become a lot more expensive, topping out at over \$2,000 for the Wacom Cintiq 21UX (~\$2400), which is also a 21-inch monitor and is overkill for anyone but a dedicated digital artist.

Trackballs still have some devotees, though there have been precious few additions to their ranks in recent years.

Mouse

Like the keyboard that is included with your standard off-the-shelf PC, generic USB mice leave a lot to be desired. They're a case study in function over form... and sometimes, they can't even get that right.

Spending a few bucks on a decent wireless mouse should be a given.

The most important thing is how said mouse feels in your hand. Your local big-box retailer or boutique computer store should have a few mice, trackballs and maybe even a tablet on display for hands-on testing. You're going to be spending a lot of time with your hand on whatever you choose so it pays to choose wisely.

We're enamored with Microsoft's latest, the Microsoft Wireless Explorer Mouse with BlueTrack technology (\$69.99) and the smaller laptop version for \$15 less. It's comfortable, tracks on surfaces that baffle other optical mice like granite, glass, marble and other polished surfaces... even on carpet if you're so inclined.

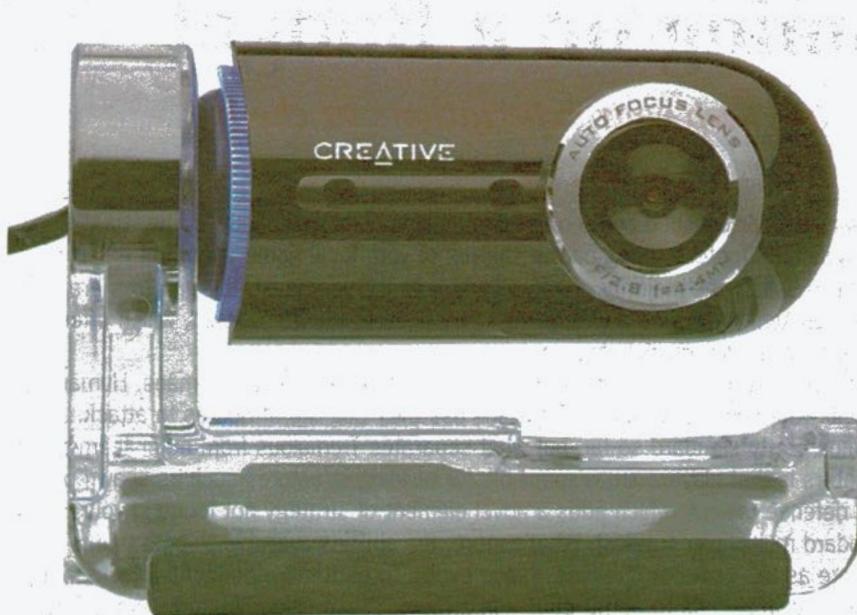


Creative's Gigaworks T20 Speakers

Speakers

5.1 may sound like a good idea when you're thinking of the world of entertainment possibilities your PC can dish up. However, for all but the most dedicated PC gamers, 5.1 speakers are more hassle than they're worth. Our advice is to go for a good 2.1 speaker set. The Creative GigaWorks T20 (~\$120) are a good balance of looks, realistic use of desktop real estate and clear, powerful sound.

Logitech's latest, the AudioHub (~\$90) packs in rich stereo speakers, a subwoofer, cable organizer, webcam stand and a three-port USB hub. It's also a laptop dock of sorts and has the perfect form factor for a smaller desk. Just plug in one USB cable and you're good to go. While it's designed with laptops in mind, it works equally well with an LCD monitor.



Creative's Live! Cam Optia AF

Headset

If you're a gamer or if you use Skype, JaJa, Google Talk, Yahoo!, AIM, Windows Live Messenger or other chat program, a pair of headphones with a mic are a worthwhile investment. Bonus points if said headset is of the wireless variety, allowing you to take bathroom breaks without having to leave your gaming session or chat (decorum note: this is generally frowned upon). You can grab a cheapie wired headset with standard mic and headphone mini-jacks for between \$20 and \$30. A wired USB set is better if you don't have front-panel audio connections on your PC and wireless is better still, allowing you to move around while chatting. We like Creative's HS-1200 Wireless Gaming Headset (\$89.99). It's got about a 30-foot range, offers about seven hours of battery life (less than the claimed nine hours but still pretty good) and includes the wireless receiver which has a break-out plug for charging the headset while it's in use. The cord is about a foot shorter than we'd like in this scenario, but it's not a deal breaker.

Webcam

Whether looking to chat with Grandma across the pond or engage in illicit chat room nastiness (don't mix up your chat sessions), you need a web cam. While an inexpensive generic cam will suffice, if you're chatting with loved ones overseas (or even if you're not), the clearer the picture, the better.

Face tracking is the new buzzword in web cams. The Creative Live! Cam Optia AF (~\$110) does this and more. The AF stands for auto focus and in addition to that, it has a 2 MP sensor to catch all the action. It can broadcast at 800 x 600 at 30 frames per second and has noise cancellation technology to get rid of unwanted background sound. Lower down the value chain you can find some pretty spiffy cams, but this one is top of the line. Perfect if you work from a home office or do video conferencing.

NAS

While Bill Gate refutes having said that no one should ever need more than 640 KB of memory — a claim that is backed up by the fact that the interwebs can't seem to agree on what the actual figure is — it still goes without saying that however much hard drive space you think is enough probably isn't.

Network attached storage (NAS) is the hard drive solution that kills storage ills. These devices sit out of the way with your router and act as a central home storage hub. Some can even stream to your networked entertainment devices without your computer being on.

The Maxtor Shared Storage II 2TB Dual Drive (~\$700) is a prime example. It can act as one 2TB (2,000GB) volume or one 1TB drive with a built in redundancy if something should go wrong. You can backup all your PCs to it, stream to the living room via UPnP and even share USB devices like other hard drives, USB keys and printers.

Router

The latest standard in routers is 802.11n. It uses some wireless magic and two wireless bands to bounce signals off each other and actually boost your network's range and bandwidth. It's all a little much to get into but suffice it to say, if your 802.11g router has ever proved to be the weakest link in your home network's speed, it's a worthwhile investment. To that end, Linksys has its slick Dual-Band Wireless-N Gigabit Router with Storage Link WRT600N (\$199.99). It's fast, long range and can share USB drives (but not printers) across the network. It's also fully backwards compatible with 802.11a/b/g devices.

A wireless router is essential equipment for home computing but you don't necessarily need to be on the bleeding edge; any trusted name brand (like Linksys, D-Link, TP-Link or others) 802.11g router will suffice for most of us.

By Aaron Zeitger



Linksys' Dual Band WRT600N



Power Pellets: PC Gaming on a Budget

Want to play PC games for free? It's possible, but keep your expectations in check.

There are plenty of ways to get free PC games. An almost limitless selection of titles are just waiting to be downloaded via BitTorrent — assuming you don't mind being branded a pirate. Meanwhile, subscription services like GameTap offer free models that let you play all the games you want, so long as you don't mind sitting through ads every time you play. Then there are the games that allow players to get going free of charge but force them to buy into infuriating micro-transaction systems to make their characters more competitive.

Indeed, if you're looking for a quality game that truly comes with no strings attached, the pool of possible candidates shrinks dramatically. There are simple puzzle games made by solo developers like the curious *A Game About Bouncing*, role-playing games such as the Java-based *RuneScape* and strategy games like the fantasy-themed *Glest*. Thing is, most of these games were developed using technologies selected for their low cost and accessibility, not for their ability to facilitate development of cutting edge interactive entertainment. Ergo, they're usually a bit shallow and kind of hard on the eyes.

But that's not always the case.

Enter *Tremulous*, a surprisingly sophisticated and innovative multiplayer shooter created by a group of just over a dozen guys working in their spare time under the name Dark Legion Development. Based on public domain source code for *Quake III*, Dark Legion began building *Tremulous* eight years ago and released it to the public in 2005.

Over the last few years the game has earned multiple independent and open source development awards. It's also been the beneficiary of countless mods, maps and updates from both the original team and the community at large. Even now, hundreds of people can be found on the game's servers at any time, night or day.

Not surprisingly, given the game engine upon which it is based, *Tremulous* bears a striking resemblance to id Software's *Quake III*, which means its 3-D worlds and

avatars appear polished and professional. It isn't quite as sparkly as the latest blockbuster shooters sitting on the shelves of your local game shop, but its visuals ought to satisfy the majority of game lovers. At the very least, the graphics are pretty enough to provide a welcoming entry point to the game itself, which offers up some surprisingly original play.

The game begins with players divided in two teams: Aliens and humans. Humans deal in weapons and armour while aliens use their bug-like attributes to attack. Sounds pretty standard so far, but what separates *Tremulous* from other team-based shooters is that players are responsible for building structures such as spawn points and defence towers, which adds a novel element of strategy not found in your standard multiplayer fragfest. What's more, the abilities available to both teams change as the game progresses. Aliens evolve to earn more powerful attacks while humans gain access to better guns and armour. These unique features make for an unexpectedly compelling experience — all the more so considering you don't have to pay a penny to play.

But the best way to learn about *Tremulous* is simply to try it. After all, all you have to risk is your time and a bit of bandwidth. Head to www.tremulous.net to download a copy for yourself. You may also want to read up on the imminent sequel, which is already well into development — again, courtesy of the open source-loving souls who make up Dark Legion Development.

Dell XPS 625

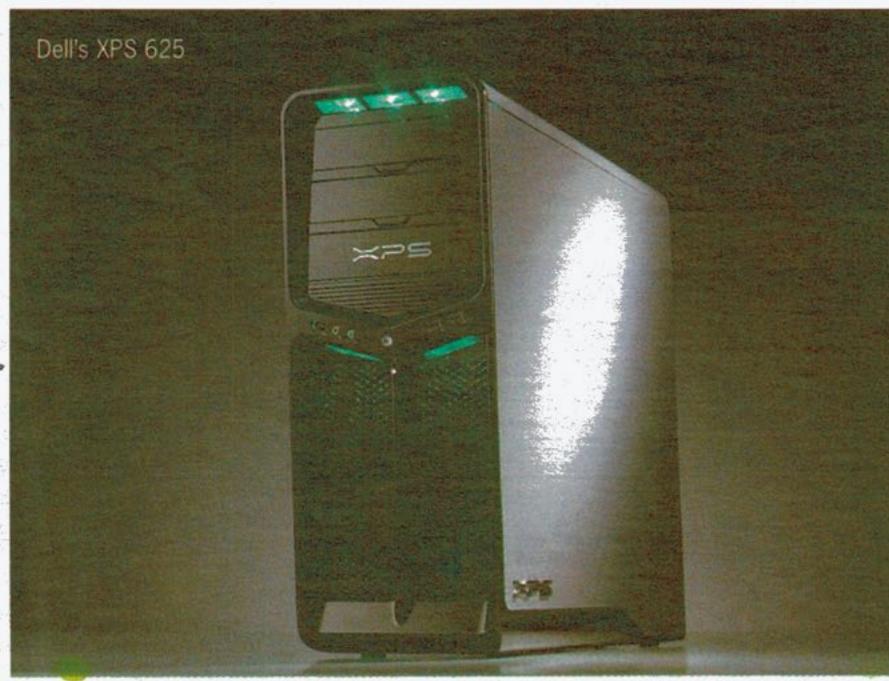
www.dell.ca \$1,249 as configured

Score: 4/5

Building a gaming PC can prove highly satisfying for the geekier element of the population. What's more, it's usually less expensive than buying a machine built in a



The open source shooter, *Tremulous*



factory. Still, there's something to be said for the sheer convenience of just buying a ready-made computer and knowing with near certainty that when you boot it up everything is going to work, and that if something fouls up all you need do is call tech support for on-site maintenance and repair.

Hence the appeal of Dell's new entry-level gaming rig, the XPS 625. Starting at just \$1,199, this sleek, brushed aluminium tower (which features customizable AlienFX lighting illuminating the front and rear jack packs) doesn't offer the sort of juice required to run the most graphically complex games on maximum settings and at ultra-high resolutions, but it's still got enough horsepower to deliver a completely satisfying gaming experience — at least for those of us who aren't die-hard polygon hounds.

Dell offers the XPS 625 in four tiers, each of which is open to custom configuration.

The most basic build features an AMD Athlon 64 X2 5600+ running at 2.9 GHz, an ATI Radeon HD4670 video card with 512 MB of discrete graphics memory, and 2 GB of 800 MHz RAM. These components won't help you set any frame rate records, but they're nonetheless good enough to run any game currently available, if not always at the highest graphics settings.

The evaluation unit Dell sent us was worth \$50 more than the bottom rung build and featured a step up in visuals via an ATI Radeon HD 4850 graphics board. Definitely worth the extra change. We'd also recommend spending a few extra dollars on additional RAM. Do that, and you'll have a surprisingly robust little gaming rig, as proved by our test results.

Our standard benchmark using Sierra's graphically sophisticated strategy game *World in Conflict* resulted in an impressive 40 frames per second running at a resolution of 1680-by-1050 and with a mixture of medium and high visual settings. We even managed to eke out a perfectly playable 30 frames per second with all settings at high and with DirectX 10 enabled.

Meanwhile, we were able to play Activision's superlative Second World War shooter *Call of Duty: World at War* with almost all graphics settings maxed and at a resolution of 1920-by-1200 without encountering a single graphical hitch.

Part of the credit for the XPS 625's performance rests with a trio of handy pre-installed utilities that many gamers will enjoy tinkering with. The first, designed by Dell, allows players to place gadgets on their desktop that monitor fan speeds and box temperature.

Another, made by AMD, lets users shut down background Vista applications to free up processor cycles for your games. And a third, also from AMD, makes processor overclocking as simple as opening a desktop program and moving a sliding bar. Useful apps, all.

Simply put, the XPS 625 is a wholly competent entry-level gaming tower — and completely upgradeable, to boot. Gear lovers will miss perks like a Blu-ray player, discrete sound, tool-less interior design, and other features common to more expensive machines, but if all you're after is a cheap means to play the latest PC games then Dell's rig is definitely worth investigation.

By Chad Sapieha

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- Super G™ and extended Range™ technologies
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Wireless Super G USB Adapter
TL-WN620G

- USB2.0 connector provided
- Atheros 2.4GHz, 802.11g/b
- Super G™ and eXtended Range™ technologies

Wireless G Router
TL-WR542G

- Atheros 2.4GHz, 802.11g/b, built-in 4-port Switch
- eXtended Range™ technology
- Support WDS wireless bridge, detachable antenna

Wireless G Router
TL-WR340GD

- Atheros 2.4GHz, 802.11g/b, built-in 4-port Switch
- Support WDS wireless bridge, detachable antenna

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Open Up Your OS

Open source operating systems

There are dozens of free and open source operating systems out there, like those based on Unix, BSD, even Amiga and MS-DOS. Some are very advanced and prime-time ready, others are little more than programming experiments in perpetual alpha mode (i.e. not ready for the vast majority of computer users to install, especially not as a primary OS). There are operating systems that are the result of one programmer's hard work, as a labour of love, there are others with a huge development community. There are those based on an open source foundation and built up then sold for a fee and there are others that are entirely free to use.

In short, there's enough fodder for discussion to fill a book... perhaps even a series of books.

We're not going to try to give an authoritative guide on free and open source operating systems — indeed, there are too many options to make that possible in this forum. Rather, we're going to give a run-down of some operating systems that we've tried, that we've liked and that we might even consider some command line tweaking and boot table configuring to run on our home systems as a secondary (perhaps even primary) operating system environment.

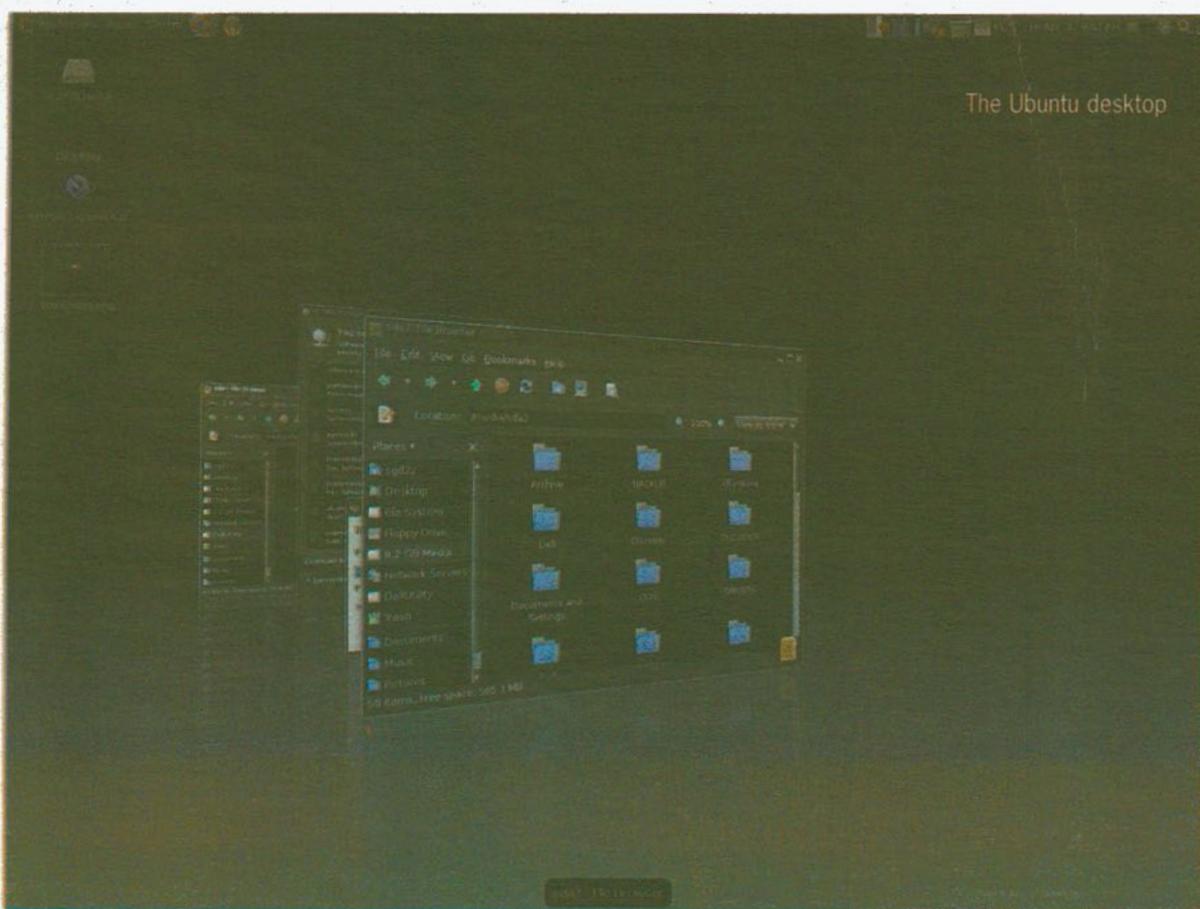
How did we get here?

It wasn't long ago that Linux was synonymous with command line hackery, obtuse text commands rather than the pretty graphical user interfaces that most of us are much more familiar with, incompatibilities with software we need to use every day and so on. However, open source and free have made great strides over the past several years. Specialized applications aside, if there's something you do on a Windows or Mac machine, chances are there's



equivalent software to do the same thing on an open source OS.

Many people's first real exposure to operating systems based on open source code came with the netbook trend. In keeping prices down, these diminutive mini notebooks cut back on system specs and used free, often custom, operating systems. The



original Eee PC, the Acer Aspire One and even netbooks from companies like Dell and HP had a low-end model that used an operating system based on open source code.

Provided users weren't looking for a primary PC, which is to say assuming they had a desktop or laptop at home or in the office, the Linux based operating systems on the aforementioned netbooks and the provided software would be more than sufficient for general computing. Consider too that the whole netbook category is based on the "cloud computing" concept where your files are hosted "in the cloud" with services like Flickr and Picasa for pictures and Google Docs or Zoho for documents, spreadsheets and other office staples.

Ubuntu

Web site: www.ubuntu.com

Current stable version: 8.10

Download size: 699 MB

No discussion of open source operating systems would be complete without talking about Ubuntu (pronounced "oo-boon-too"). This Linux distro has reached the mainstream.

Ubuntu itself, along with derivatives like the KDE-based Kubuntu and the education specific Edubuntu install are intended to be used on reasonably good-spec machines. If you can run Windows XP on your PC, you're in good shape. If your machine can run Vista without issues you can use all the fancy Compiz effects like 3-D desktop transitions, wobbly windows and so on.

Xubuntu is another Ubuntu derivative based on XFCE and is much lighter on system requirements. I traveled South East Asia for three months with just my Acer TravelMate 340T running Xubuntu 7.04 and was very

happy with the results. I was able to do everything I needed to do: file stories, manage pictures, send and receive email, use web services to book accommodations and the like. The machine (which I still have and occasionally use) was "designed for Windows 98" and choked on Windows XP.

There are a number of Ubuntu derivatives, some of which we'll get to below. These are application-specific distros, tweaked with software and services for a specific application. Linux Mint for beginners, MythBuntu for media centre PCs, Easy Peasy (covered later) which evolved from the Ubuntu Eee project (not to be confused with Eeebuntu).

Ubuntu and its offspring promote ease of use. Given a reasonable adjustment period, savvy PC users can expect to get used to Ubuntu's intricacies and, specialized applications aside, will be able to do everything they did on their Windows and Mac OSX machines.

Puppy Linux

Web site: www.puppylinux.org

Current stable version: 4.1.2

Download size: 94 MB

After I got back to Canada after the aforementioned SEA trip, I learned about Puppy Linux and made the switch on my old laptop. It's an impressive distro, the core of which is created and maintained by Barry Kauler. When I first tried Puppy Linux out, I was amazed by the fact that everything just seemed to work, right out of the box — or rather, right off the recently burned disc. Puppy Linux can be installed as a main or secondary operating system, but it can also be run right off a live CD. Unlike many other live discs, the Puppy disc can be removed once the system is booted: it's light-weight and can be run entirely in RAM. Since I discovered Puppy Linux, I always have a live disc on-hand as it boots on literally every machine I've tried it in and gives a graphical disk partitioner, a web browser, networking (after a quick guided install) and well thought out wizards that explain in plain English

what's going on. Puppy Linux is what I turn to when all else fails.

In addition to running in RAM, Puppy can also be installed as a primary or secondary OS. It's perfect for older machines that have a hard time running Ubuntu or Windows and does basic computing tasks like word processing, spreadsheets, web browsing, e-mail and more without needing to install anything.

It's also free. Both free as in beer and free as in speech. For our attempts at disambiguation on these two different types of "free," check out the last editorial page of this issue for The Last Byte.

DSL — Damn Small Linux

Web site: damnsmalllinux.org

Current stable version: 4.4.10

Download size: 50 MB

Another light install that just seems to work. Damn Small Linux (DSL, not to be confused with Direct Subscriber Line Internet service) started, as the web site says, as an experiment to see how much could be fit onto a 50 MB live install disc. The idea was to fit as



much as possible onto a business card CD (remember those?) as a live Linux distro. It has a long list of developers from all over the world and is well supported. And, like Puppy Linux, it can run entirely in RAM. Perfect for old machines that have been left in the dust by the marching-ever-on progress of commercial operating systems, DSL is light enough to run on a 486 with a mere 16 MB of RAM.

As the name suggests, DSL's highlight is the small footprint. Though it's refined and works well, it's not as user friendly as some other distros we've tried. That said, the initial install process is simple and it does the basics well. If your Net connection sucks, if your service provider throttles bandwidth (hint: if it's one of the majors, they do), if you're on a "Lite" connection or even dial-up or if you suffer under draconian bandwidth caps, the small size of the install ISO download make it well worth a try.

Easy Peasy

Web site: www.geteasypeasy.com

Current stable version: 1.0

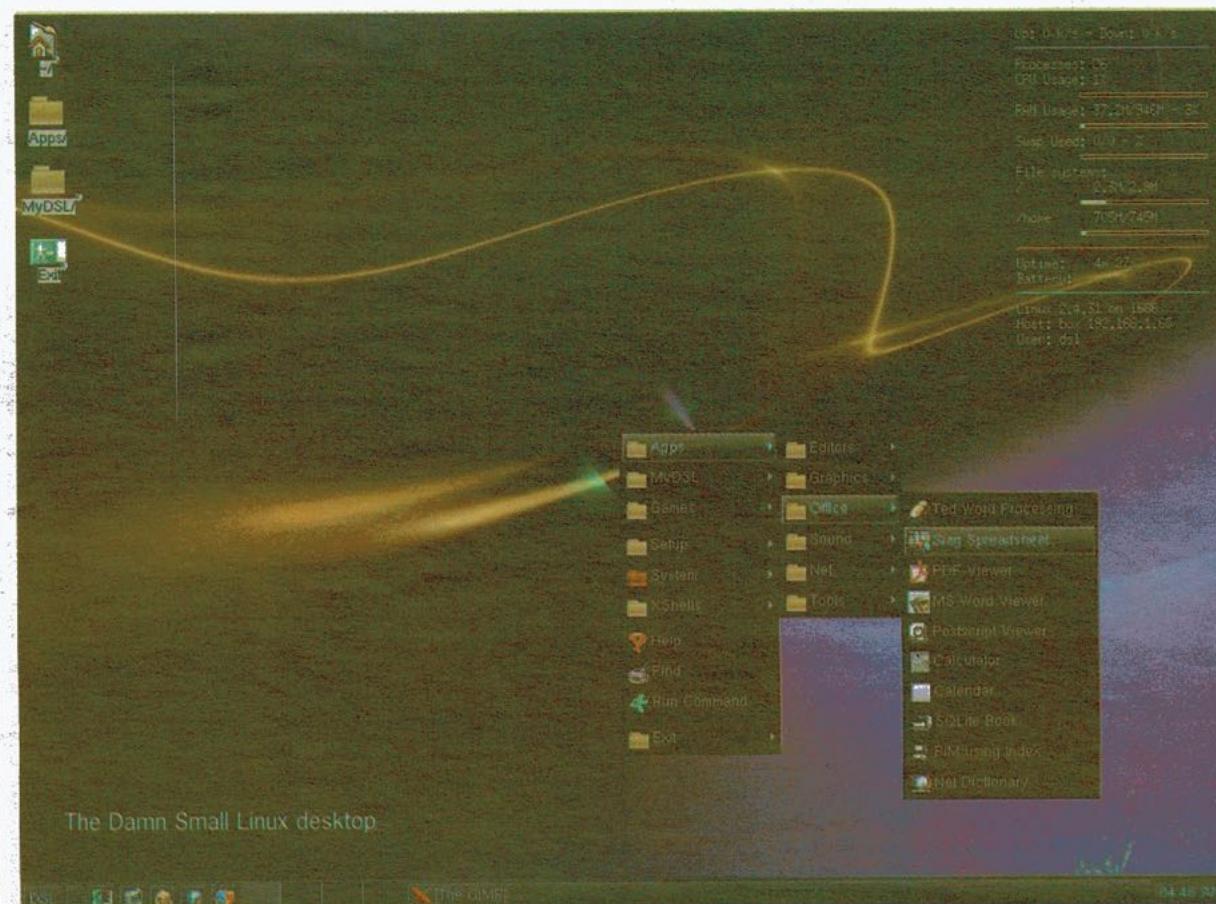
Download size: 865 MB

Easy Peasy evolved from the Ubuntu Eee project and changed its name to avoid confusion with Eeebuntu. As we hinted, it's based on Ubuntu, but it's lighter and uses a one-click interface like the Linspire distro on the base model of the Acer Aspire One PC. System tools and applications are divided into categories that run along the left-hand side of the desktop. Categories are broken down into Favourites, Accessories, Games, Graphics, Internet, Office, Sound and Video, Universal Access, Preferences and Administration.

Applications like Skype for VoIP calls, Firefox for browsing and Pidgin can be found in the Internet category, among others. Office applications like OpenOffice.org word processing, presentations and spreadsheets are found in the Office category. There are a lot of free and open source apps installed by default so once you download the disc image and install it on your netbook or PC, you'll be presented with a system that can do all of the basic computing tasks and more.

If you're a fan of the base model Eee PC and Acer Aspire One model of dividing applications into categories, doing away with the traditional desktop interface but suffer under the convoluted methods for installing applications you want (like Skype, Pidgin and the latest version of Firefox), Easy Peasy might be the answer.

By Andrew Moore-Crispin



The Damn Small Linux desktop

Advertiser	Address	City		Web site
1stDataRecovery.com	745 - 1050 West Pender St.	Vancouver	BC	www.1stDataRecovery.com
AA Electronics	1350 Matheson Blvd. E Unit #8	Mississauga	ON	www.aa-e.com
Aartech Canada Inc.	120-2377 Hwy 2	Bowmanville	ON	www.aartech.ca
ABO International	10E - 505 Queensway East	Mississauga	ON	www.aboink.com
Allway Technologies Inc.	5 - 3671 Viking Way	Richmond	BC	www.allway.ca
Angel Electronics	Unit B-2, 1515 Matheson Blvd E.	Mississauga	ON	www.angelectronics.ca
Business and Technical Training College	150 Eglinton Ave. East, Suite 402	Toronto	ON	www.bttcollege.com
Digital Electronic International	825 Denison St., Unit # 8	Markham	ON	www.computercanada.net
Fujitech	180 Steeles Ave. W, Unit 2A.	Thornhill	ON	
e-Outlet Canada	4884 Dufferin St, Unit 2	North York	ON	www.eoutletcanada.com
Genusource Consulting	PO Box 3237	Airdrie	AB	www.genutax.ca
Grey Tech Computers	550 Alden Road, Unit 110	Markham	ON	www.greytech.ca
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The Last Byte

Free is a funny word



In the computer world the word "free" often refers to a free trial, a free basic version of a program or a free ad-supported software package. However, as you know (or at least as you hopefully now know, after reaching this, the last page of the March issue of HUB: The Computer Paper

dedicated to free and open source software), there's a whole world of free software out there — both on Windows, on Linux and on the Mac — that is really, honestly and truly free. That is, free in the traditional sense; free as in you don't have to pay anything for it. Free as in "the best things in life are..." But, in traditional free software / open source terms, "free" can be interpreted either as free as in beer or free as in speech.

Free as in beer

Software that is referred to as "free as in beer" is free in the traditional sense; you don't have to pay for it. In the real world free beer often comes at a cost, whether that cost is a hangover the next day or whether it's your turn to buy next time. With free as in beer software, you're often invited to upgrade to a "professional" version with a few more features or asked to consider donating money via PayPal if you find the software useful.

Free as in beer software is free for the taking. However, it's not free for the hosting; that is to say,

you can't grab freebie software and host it on your website without first getting permission. You can provide a link to the developer's download page.

Free as in beer software is closed-source. That means that you're not allowed to get into the code to either tweak or create your own software program using the freebie's code as a foundation. This type of free software is often free in a somewhat crippled version. A prime example of this is AVG Free. This anti-virus software is among the recommended anti-virus programs for Windows and the "personal" edition is free... free as in you don't have to pay for it. Not free as in you can do what you like with it. Also, if you're running a business, whether small or large, the license terms forbid you from using the free version of the software.

Free as in speech

Software that is called "free as in speech" is open source and much more permissive but in some cases, less user-friendly. The GNU page (www.gnu.org) describes it as a matter of liberty, not price. It also clearly states the rules for free as in speech software.

The freedom to run the program, for any purpose (freedom 0). The freedom to study how the program works, and adapt it to your needs (freedom 1). Access to the source code is a precondition for this. The freedom to redistribute copies so you can help your neighbor (sic) (freedom 2). The freedom to improve the program, and release your improvements (and modified versions in general) to the public, so that the whole community benefits (freedom 3).

In short, software that falls under the category of "free as in speech" allows anyone, including businesses, to do with the software as they please.

Free as in speech software appeals to the better points of human nature and is designed to foster sharing. Anyone, anywhere is entitled to modify the software as they see fit, to publish different versions based on the original source code, to distribute free or to charge a fee. Developers that release their software under the "free as in speech" model essentially relinquish control over the original idea and the work they put into it.

Creative Commons

Increasingly though, we're seeing people use the Creative Commons licensing scheme to release their intellectual property. Creative Commons licensing is free to use (side-stepping the hundreds of dollars per hour that lawyers charge to create an end user license agreement (EULA)) and offering a menu of choices for content creators to license their work for distribution.

Creative Commons licensing can relate to software but also text-based work like a story, article or white paper, video, music and so on. Under the Creative Commons licensing ideals, creators or publishers have four options and each of these licensing models has its respective place. I for one am a proponent of Creative Commons licensing. Its four distinct levels look after the original content creator's interests while still fostering sharing at the same time.

A free sharing of ideas benefits everyone involved and Creative Commons fosters that concept while still providing a level of protection to the original content creator.

Until next time,

Andrew Moore-Crispin

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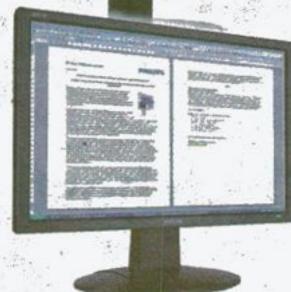
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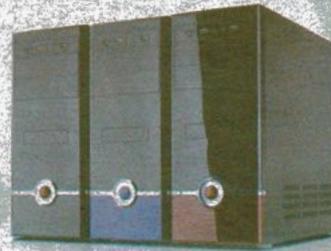
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